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VOL. XVII OCTOBER, 1919. No. 10.

PRESIDENT OF CALIFORNIA OSTEOPATHIC ASSOCIATION MAKES SERIOUS CHARGES—PROOFS DEMANDED.

To the Editor:

My attention has just been called to an unsigned "Special Article," "The Roll Call and Results," that appeared in your July issue.

The writer takes issue with my statement that A. B. 933 merely permitted "the Osteopath to continue the same practice which he has enjoyed for the past twelve years." That was all this bill was intended to do. Osteopaths have enjoyed unlimited rights in practice in California for twelve years with full knowledge of the State Board of Medical Examiners, the statement of the Secretary to the contrary notwithstanding.

Dr. Norman F. Sprague, an osteopath, testified before this Board, under oath, to having performed a major surgical operation. The Board declined to prosecute. The Medical Board had knowledge of many other osteopaths practicing major surgery.

The right of osteopaths to practice as physicians and surgeons was raised by the Optometry Board in the case of The People vs. Lineker. Superior Judge Ogden of Oakland, before whom the case was tried, ruled in favor of the osteopaths.

I reiterate the statement that the powerful lobby maintained by the American Medical Association in Washington prevented the osteopathic physicians from securing proper recognition in the army and navy. This statement does not arise from a "superheated imagination." It is a fact that is easily proven.

I am reserving for other occasions comment upon how osteopaths who passed the examination for commission in the army were denied these commissions because they did not bear the label M. D. and how some of these were later commissioned. This will make interesting reading but I think it will more deeply concern the public than the medical profession.

One might infer from the statements of your anonymous correspondent that I was the only one in Sacramento interested in medical legislation. Attorney Louis H. Ward was constantly in attendance, looking after the interests of the State Medical Society. * * * * * * * * *

Your correspondent classifies the legislators into three groups. He states, "We are reserving for other occasions many comments on each of the groups and the individuals that compose them."

I would suggest that he reclassify them, placing in one group all those who voted for the osteopathic bills, and then analyze their records. The legislators who voted for the osteopathic bills are the ones who voted right on all moral issues. This group would comprise, with very few exceptions, all the big brainy men of both houses. It must be apparent to any thinking person that the osteopaths could not have gained the support of these men had their bills not had merit.

It is a noteworthy fact that Mr. Ward could not secure a strong man in either house to lead the fight against the osteopathic bills.

In conclusion I wish to say that your correspondent has grossly misrepresented the facts throughout his entire article.

Very truly yours,

(Signed) W. W. VANDERBURGH.

1275 Flood Building, San Francisco.

The above communication of W. W. Vanderburgh, D. O., President of the California Osteopathic Association, is crowded with so many erroneous statements that we cannot spare space in this issue to dissect all of them. Many of his errors do not require further comment as they have been frequently and fully exposed already.

The testimony of President Vanderburgh that some osteopaths have "enjoyed" unlimited rights we do not doubt. The Medical Practice Act set definite limits and established definite rights. To "enjoy" going beyond the limits established by law is no new or creditable performance. Many "enjoy" violating the best divine and human laws, but their enjoyment does not justify the violation and cannot be logically urged as establishing their right to further and future enjoyment.

In the issue of the San Francisco Examiner published on May 7, 1919, the State Board of

Medical Examiners in replying to similar statements issued by W. W. Vanderburgh, D. O., stated: "The majority of the osteopaths do not desire to practice in violation of the law as interpreted by the Attorney General. If the author of these statements (W. W. Vanderburgh, D. O.) will present satisfactory evidence to the Board of specific violations of the Medical Practice Act, the legal department will guarantee to prosecute."

More than four months have elapsed since the Board has made this request and guaranteed to prosecute, but President Vanderburgh has failed to furnish the evidence. We now remind him that the Board is still ready to prosecute all violators of the Medical Practice Act, and in the interests of public health and safety we believe President Vanderburgh owes it to the commonwealth to present such evidence as he claims to have.

Another astounding statement that President Vanderburgh reiterates is that "the powerful lobby maintained by the American Medical Association in Washington prevented the osteopathic physicians from securing proper recognition in the army and navy." He says this is "a fact that is easily proven."

We hereby call upon W. W. Vanderburgh, D. O., to prove that the Congress of our country is subject to the influence of the American Medical Association and did a grave injustice to the osteopaths. Such an absurd accusation coming from an obscure source might be treated with proper contempt, but coming from the spokesman and President of the Osteopaths of California it must be given serious consideration. It is for this reason that we demand the proofs which President Vanderburgh claims he can easily provide.

President Vanderburgh in his indulgent interpretation of the Medical Practice Act finds himself not only in opposition to the Attorney General but in hostile attitude to the Supreme Court.

"The right of osteopaths to practice as physicians and surgeons," President Vanderburgh has regularly contended was established by law and "enjoyed" for twelve years. In order to surround the "enjoyment" with greater safety than it apparently had during these dozen joyous years Assembly Bill No. 933 was introduced at the last session of the Legislature. According to President Vanderburgh, it was a superfluous bill, as the osteopaths were already for twelve fat years enjoying the rights which it proposed to confer. According to the action of the Governor, however, who refused to sign it, it was a menace to public health as it conferred the right to practice as physicians and surgeons upon the unqualified.

The right of osteopaths to practice as physicians and surgeons is not a matter for President Vanderburgh's or our interpretation.

The Supreme Court sitting in bank in a decision written by Justice Wilbur and concurred in by Justices Lennon, Shaw, Lawlor, Melvin and Olney said: "The law prohibits such conduct, and is constitutional."

In the decision referred to, that of C. G. Rust, Crim. No. 2242, a decision we commend to the study and observance of President Vanderburgh and all those that look to him for guidance, we read:

"We think it fairly apparent, however, that the Legislature has, in effect, always used the terms 'physician' or 'surgeon' and 'physician and surgeon' as applied to those practicing medicine and surgery within the meaning of the various medical acts, as contradistinguished from the practitioners of osteopathy. For instance, the first law regulating the practice of osteopathy provided, 'The system, method and science of treating disease is hereby declared not to be the practice of medicine or surgery within the meaning of the act of 1876, regulating the practice of medicine. The corresponding medical act passed by the same Legislature a few days previous (Stats. 1901, p. 56) declared that those were deemed to be practicing medicine or surgery who held themselves out "as being engaged as doctors, physicians or surgeons," etc. (Stats. 1901, p. 63, Sec. 16, sub. 1). We thus have the legislative declaration that an osteopath is not practicing medicine or surgery, and that "physicians" and "surgeons" are practicing medicine. ". . . The law under which the petitioner received his license to practice osteopathy recognized that that practice was separate and distinct from the practice of medicine and surgery, and the requirements for a license to practice osteopathy and for a physician's and surgeon's license have always been different."

We hesitate to believe that the President of the California Osteopathic Association can condone or commend the unlawful conduct of the few holders of osteopathic certificates who surreptitiously practice as physicians and surgeons not only in violation of law but of the rights and health of the people.

PHYSICIANS—REGISTER YOUR BIRTHS PROMPTLY.

CONSTRUCTIVE SUGGESTIONS WANTED ON MEDICAL PRACTICE ACT.

In a letter addressed to the profession of the State the Section For the Advancement of Medical Education and Science of the League for the Conservation of Public Health asks each individual doctor to comment specifically on the deficiencies of the present Medical Practice Act and offer constructive suggestions on administrative, educational and enforcement features that will better safeguard the public welfare.

This important work of the League is under the direction of William E. Musgrave, M. D., of the University of California; William Ophuls, M. D., Dean of Leland Stanford Junior University School of Medicine; George Whipple, M. D., of the George Williams Hooper Foundaton of Medical Research, Drs. Dudley Fulton, Stanley P. Black and other leading members of the profession.

All thoughtful men who have had any responsibility for public or private health realize that a strong Medical Practice Act is of fundamental importance not only for the steady prog-

ress of Medical Science but for the protection of public health. It has been invariably observed that wherever lax Medical Practice laws are loosely enforced the general average of Medical Standards and work is proportionately low. It could not be otherwise.

Anyone who will contribute ideas that will strengthen the present Medical Practice Act and raise its standards from their present low level will be rendering a service to the health of this commonwealth.

It is the professional and civic duty of every member of the medical profession to take a personal interest in this matter. Past inactivity and the general indifference of the medical profession of this State are all reflected in the indulgent and incongruous provisions that are shot through the present act. In suggesting and advocating the raising of standards to keep abreast of the progress of medical science no selfish thought inspires our action. The Medical Practice Act is intended for the benefit of all the people, and whatever will benefit the public most is best for the profession. Here in California we should be satisfied with nothing less than the best. Read the present Medical Practice Act carefully and send to the League that has engaged in this worthy enterprise your best constructive thought.

PHYSICIANS—REPORT COMMUNICABLE DISEASES WITHOUT DELAY.

WHAT IS MEDICINE?

From the Latin "medeor," to cure, and hence as Webster states, medicine means the art of preventing, curing or alleviating the diseases of the human body. To this we would add only one extension, to bring the term thoroughly up to date and make it completely descriptive. Medicine means not only the prevention, cure and alleviation of diseases of the body but also of the mind. This was of necessity included in the first definition but is worth noting specifically in addition. Thus it is seen that if our definition be true, the art of medicine includes all that pertains to prevention of disease and maintenance of health, all that pertains to the cure of disease and all that tends to make incurable or unavoidable disease more endurable. In passing, it may again be emphatically stated that such a definition makes of primary importance the study of disease causes and results. For without this knowledge we are unable effectively to limit, control or cure disease. Further, to diagnose disease requires a certain fundamental knowledge of the human body and mind in their functional as well as their morphological relationships. Such knowledge, in turn, presupposes a certain temperament of the student and scientist who can scan facts and evidence with impartial eye, and also presupposes a certain groundwork of more elementary study which is necessary to fit the seeker for his higher studies on the complex processes of life and so-called death.

We have here then, an all-inclusive and most scientific art, denominated medicine, which is concerned with the most vital relations of human life. The merest glance at its field shows that it is the most important of all arts and sciences and, insofar as any other art, science, pursuit, or craft has a vital human significance, so must it be included in the field of medicine in the broad sense. Of all men, the physician with most literal truth can say, *"Nihil humanum mihi alienum."*

With such a definition, and such a program, small wonder is it that physicians tend to become specialists and sometimes forget the wide horizons of their profession in the narrow delving into some one important but limited scope of endeavor. Every physician is a specialist to the extent that he cannot keep in touch with all human progress which bears on our definition of medicine. He must perforce follow within the limits of time, space and strength which are assigned him. Once in a while, he may on some hill-top of inspiration or introspection, realize how organically close is the connection and inter-relationship between all the intricate and dissimilar parts of human life and progress which have any bearing on medicine as defined above.

So much for the definition of medicine as it affects the physician. There is another and fully as important aspect of the matter. The general public, together with the advocates of certain narrow medical or semi-medical cults, and various faddists, are prone to say that there is such a thing as "allopathy," and "old school doctors," and "regulars." The attention of all these is directed to our definition above. Some of these narrower schools of medical art, as for instance, the eclectics, even go so far as to claim that the advance of modern medicine is due to the revolt of eclecticism from what is misguidedly called the "old school." Such a statement simply illustrates a narrow perspective which leaves out of account the definition of medicine here emphasized.

Modern medicine, as defined, has no quarrel with any agency or method for prevention, cure or alleviation of disease, physical or mental. Modern medicine is all-inclusive of agencies and methods which are of service in the prevention, cure or alleviation of disease. Being scientific and therefore demanding a catholicity of selection of those methods and ideas which shall receive its approval, modern medicine requires that any system or idea must prove its right to acceptance, by the results it can achieve, and that its claims and employment shall not extend beyond the range of its actual merits. To this extent all effective means of prevention, cure and alleviation of disease are a part of modern medicine, and to a surprisingly large extent, are actually employed by medicine in the attainment of its ends. Medicine is not concerned with the local labels which may be appended to certain methods or systems. What is good in these systems it uses and has always used. Its selection is catholic and gauged by two things, accurate diagnosis and accurate fitting to the diagnosis of the best available remedial or preventive agency, be that agency what or whose it may. In medicine there are no patented ideas. Nothing is so democratic as science. There each stands on his own merit. Wealth, fame, posi-

tion, family, help no whit. Medicine chooses from all for service to all.

As has been stated, the criterion of selection of therapeutic agencies is the measure of their effectiveness only. The source is not considered. Two further considerations, however, arise, with reference to their application. In the first place, the individual who seeks to exercise the healing art as a physician, must be honest. In the second place he must have sufficient knowledge of physical and mental anatomy and function as to enable him correctly to diagnose and correctly to fit the remedy to the diagnosis. Proper education is therefore the first and primary fundamental for the physician. Medicine embraces all that pertains to the elimination of disease. It is as absurd to elevate some limited and local truth to the position of a universal system as it is to claim that there is no disease and no need for cure. The one violates medicine's requirement for proper education, while the other makes all existence ridiculous and destroys charity, faith and progress.

The modern physician is not an "allopath," he is not a "regular," he is not "old school" or "new school." "Revolt against the regulars" and the "old school" is about as sensible as revolt against the sunrise or the lunar control of tides. Whenever such a claim is made, look for the wood-shrouded African and you will find almost invariably a short-cut to the honor and earned prestige of the real physician, or else an easy way to separate the unthinking public from its cash. The blatant advertising of chiropractice, that it offers a new and lucrative field for quick riches and social prestige, is self-evidence that the cure, prevention and alleviation of disease is but a means to an end, and therefore that the candidate's preparation and effectiveness is to be the minimum which will permit him to twist the principles of medicine to his own selfish ends. In effect, they say, "The public be damned, we want cash, and the prestige of the doctor." Against such tendencies to lower medical practice requirements, legislatures have very properly considered the health of the people, which is their most valuable possession, as of more importance than the pocket books of the claimants for lower entrance requirements. A diffusing knowledge among the people of this and other states, of the real definition of medicine, and of the real objects and results of efforts to lower medical practice requirements, will lead to a concerted and popular backing-up of the legislature in the establishment of a thoroughly satisfactory medical practice act, which shall at once protect the people against the charlatan and the get-rich-quick faddist, and render available for the people the best that modern medicine can give, when unhandicapped by distracting issues and unnecessary burdens.

PHYSICIANS: VARICELLA CASES SHOULD ALWAYS BE REPORTED AT ONCE.

THE CALIFORNIA PROBLEM OF CRIPPLED CHILDREN.

Special attention is directed to the article in this issue by Dr. Harry Leslie Langnecker on "Clinic for Crippled Children." The matter is so pressing and so little comparatively has been done in this regard that it deserves the earnest attention of the medical profession.

With the realization that over two thousand children, residents of this State, are handicapped by some crippling or deformed condition,—and that deformity amenable to treatment,—the problem of efficient correction and care becomes, at once, a matter of grave medical concern. Indeed there are special reasons why, at the present time, this branch of child welfare work should be carefully investigated, and means provided to handle properly these cases. In the first place, most of the families having a crippled child, are not financially able to obtain the best treatment. As a result the condition becomes progressively worse. As the child grows older the chances for satisfactory surgical results are reduced. In the second place, those cases that are able to attend a free clinic, are not usually the worst deformed and treatment is not thoroughly carried on. They are only partly controlled and therefore the ultimate outcome is not very gratifying to the surgeon. In the third place, the physicians who have been specifically trained in the utilization of the various methods and means for the correction of deformities, are located in the cities, near the larger medical institutions. And finally, the education of these children, possibly owing to their inability to attend the public schools, is sadly neglected and their mental attitude, therefore, decidedly warped.

The idea of an institution where not only the deformity might be corrected, and the means provided for the long period of treatment, but also, at the same time, the child might be given a practical education, seems both sane and logical. Unlike most state institutions, where the main object is to care for the hopeless physically unfit, such an establishment would be a hospital in so far as the disability would need treatment plus a manual training school adapted to educating the child.

Graduation would signify completion of treatment and education equivalent to the grade attained at the same age in the public school.

PHYSICIANS—REMEMBER THE IMPORTANCE OF PROMPTLY REPORTING BIRTHS.

"SCHOOLS ARE PUBLIC NOT THE CHILDREN."

How often have you heard the above platitude? The few that oppose the physicial examination of school children regularly rehearse it and sing it in chorus at indignation meetings.

Children's year has impressed upon most parents in California the need and value of frequent examinations. Physical examinations of 53,462 children in forty-five counties of the state disclosed that 46.6 per cent. had defects, 36 per cent. abnormal tonsils and adenoids, 24.7 per cent. were below the height or weight of the national scale, 5.5 per cent. had defective teeth.

In San Diego more than 77 per cent. of the children examined between the ages of one to six years, inclusive, were defective. It is obvious that the wealth of work done during Children's year

will be dissipated if it is not guarded during the school period. It is of interest to all the people that this children's work shall be followed up and that the examination of school children shall be conducted by physicians of scientific ability who can distinguish which ones are suffering from incipient diseases of teeth, tonsils, vision, etc.

Those who resent this as a violation of rights and say, "Schools are public not the children," cannot guarantee that the children will not catch or spread contagious diseases. When children contract and spread contagious diseases among other children they are a "public menace." How are we going to prevent, detect or cure diphtheria, except first by inspection, examination and the administration of antitoxin? It is certainly important to those who are not immune that germ carriers who may spread the infection to others should be detected and isolated.

The courts of this country have held an owner of scabby sheep liable because his sheep broke through a faulty fence and communicated the scab to his neighbor's sheep. What kind of parents are those who consider their children less precious than sheep? Who wants to have his children exposed to smallpox, diphtheria, meningitis, typhoid, etc., because some few are indifferent, careless or skeptical and recklessly remonstrate, "Schools are public not the children."

PHYSICIANS—REGISTER YOUR BIRTHS PROMPTLY.

ANOTHER APPEAL TO CUPIDITY.

Recently another surgical house, with evidently no knowledge or memory for editorials in the Journal last year on this subject, has been sending to physicians coupons entitling the physician to a 20 per cent. discount (or rebate) on goods supplied on the physician's order. Presumably dealers will continue to attempt to fleece their customers just as long as any physicians are found dishonest enough to conspire with them on some such system of rebates or special privileges. Fee splitting is iniquitous and if done by some of the most advertised of the profession, is none the less reprehensible. Rebating on drugs or surgical goods and appliances is equally reprehensible and our indignation at those firms which openly offer such terms is only held in leash by the knowledge that still some doctors are dishonest, and far enough out of touch with medical ideals as to encourage these wretched practices.

PHYSICIANS—REPORT COMMUNICABLE DISEASES WITHOUT DELAY.

ARE THERE ENOUGH DOCTORS?

Common opinion, both lay and professional, says that there are enough and more than enough doctors to supply the medical needs of the country. Recent circumstances, however, throw considerable doubt on the accuracy of this conclusion. The difficulty of the Army and our allies in obtaining the doctors needed for the war was a surprise. Also were we surprised to find the dearth of physicians in many localities when the military need had been met. Hospitals, clinics and laboratories were confronted with a serious problem in the scarcity of doctors. Industrial concerns and public health agencies likewise reflected the lack. The difficulty in filling the military needs was followed by the drafting of senior medical students even, and then the experience of England and the startling shortage of doctors in civilian lines led to a careful conservation of the available supply of doctors and the exemption of medical students. Even under these extreme conditions, the statesmanlike attitude was preserved that only high class, well-trained doctors are wanted, and the multiplication of medical schools was discouraged and inferior schools were closed.

Dr. I. M. Rubinow in a recent issue of the Medical Review of Reviews undertakes to analyze the question of the supply of doctors in proportion to the demand for them. He estimates the total number of doctors in the United States at 150,000 roughly, as compared with 133,000 lawyers, 134,000 clergymen, 140,000 music teachers and 600,000 teachers of all sorts. It is unnecessary here to dispute over the relative importance of these various classes. Certainly, however, the average family has greater need for a doctor than a lawyer and certainly a doctor cannot expect to serve as large a clientele successfully as can a clergyman. An estimation of one doctor per 600 or 700 population means nothing because of diverse conditions in different sections.

In spite however of the apparently large number of doctors in proportion to the population, Rubinow finds that this proportion has actually shrunk from 1850 to 1910. During the same period he finds evidence that the supply has not kept pace with the demand. This is due to the great expansion of medical inspection of schools, quarantine and public health services. Medical journalism has absorbed many men who otherwise would be practitioners. Laboratory work in all its manifold deviations has taken a small army of doctors additional. Experimental medicine accounts for a goodly number, with whom may be reckoned medical teachers. Insurance has opened a new and growing field. There is a larger demand for doctors in obstetrics, tuberculosis, mental disease, and other lines, than formerly. And even with these factors in mind, the actual proportion of all doctors in the population has decreased in the period noted. During the period when the medical profession was not quite holding its own in point of numbers with the population, the number of lawyers increased 200 per cent., the clergymen by 205 per cent., the teachers by 396 per cent., the dentists by 410 per cent., and the music teachers by 770 per cent. All this while the population increased 138 per cent.

There is plenty of room for well-trained doctors. There is no room and no demand for poorly trained doctors. Medical education is an expensive affair, the most expensive, probably of all education. No institution can do satisfactory medical teaching without an endowment, part of its staff, at least, on a full time basis, and a liberal equipment of laboratory, library and hospital. The half-baked doctor is the sorriest of all poor pro-

fessional types. His tribe is decreasing and must disappear. There is work for every well-trained doctor and this work will increase.

PHYSICIANS: VARICELLA CASES SHOULD ALWAYS BE REPORTED AT ONCE.

MAKING SCIENCE POPULAR.

Seldom has the pressing necessity for translation of scientific knowledge into popular terms been phrased more strikingly than in a recent address by Chester H. Rowell.[1] "It seemed so hopeless to give the public what it ought to have, and so worse than useless to give it what it wanted. The whole mental viewpoints were different. The scientist is cautions, accurate, impersonal. He uses his imagination to jump at conclusions, but as a guide to experiment and investigation. He hesitates to announce a discovery until he has fully verified it, and then he limits himself strictly to the one step he has taken into the Unknown, and avoids flights of fancy into its speculative possibilities. If his knowledge is fragmentary, he refuses to fill out its gaps, and he is resolutely non-commital on what he does not know. He cultivates an impersonal impartiality, and even on a controverted question he would scorn to win a victory by misstating or understanding an opponent's position or evading any of the evidence for it. The public, on the other hand, demands cocksureness, especially on all the consequences which a discovery suggests to the imagination. It is intensely personal, and inquires first what use it can make of the discovery, or whether it confirms or opposes its prejudices. It undervalues accuracy, overvalues vivid picturesqueness, and does not understand impersonality or impartiality at all. How shall the scientific man condescend to such a rabble without losing his soul?"

There is the question and on our answer depends whether we shall see scientific medicine advance or retrograde. Science and especially medical science must see to it that the public is apprised of what science is doing and why it is being done, also that the public is educated in the application of science to everyday life. The great means of doing this is, of course, by education through the popular press, and here is a medium and an audience waiting. This task awaits us and must be undertaken without delay.

PHYSICIANS—REMEMBER THE IMPORTANCE OF PROMPTLY REPORTING BIRTHS.

Editorial Comment

Why do all the new medical graduates wish to locate in a city? Why is there a greater shortage of doctors in small towns and the country than in the cities?

Would that medical writers would take to heart Shakespeare's words,

"Since brevity is the soul of wit,
And tediousness the limb and outward flourishes,
I will be brief."

The Medical Brief very aptly carries this on its cover.

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[1] Science, Aug. 15, 1919.

Says the Tennessee State Journal of Medicine, "We would very much like to have the fellow who thinks that the editor of a State Medical Journal has no troubles, come in and correct a few papers for us. . . . All these and some two hundred other things as bad or worse are part of the game that the editor has to play all by himself. If it were not for some safety valves, every editor would swell up and bust at least once each month."

In the New York City Hospitals the incidence of diphtheria as a cross infection has been greatly reduced by applying the Schick reaction to all cases of infectious fevers and immunizing all who show susceptibility to diphtheria. Every physician should know how to perform the Schick reaction and have the means available for it. This is of special importance in small towns and rural districts where the advantages of city health departments are lacking.

The County Medical Society Bulletins in this state are always interesting reading and worth the attention of every doctor. Says the Santa Barbara County Bulletin, "Out of the northern redwoods comes the latest addition to the County Society Bulletins on our table (The Mendocino County Bulletin). These bulletins from San Diego to Fort Bragg, are a long arm of visible good fellowship and unity. Consider the Brother of the north swashbuckling forth in the black nights of rain, among the great redwoods, to ease the croupy child; and look upon the one who plies his way under the midday glare of yellow sun upon the yellow sand in the Imperial. Do you rise?" Of course we rise,—in that same spirit of fellowship and unity which makes the Brother of Mendocino feel the comradeship of the Brother in far away San Diego or Imperial.

"That experience (in Army hospitals) causes me to think that when there are nurses who typify the spirit of true nursing, why should we permit criticisms against graduate nurses as a body because of a few who refuse the call to go where or when needed, thus failing to live up to their pledge of service to their profession? What we need is that the higher standards of nursing be adhered to in our association with physicians and each other; or, in simple language, loyalty to all the ideals our profession stands for." These words are from an article in Southwestern Medicine by Matilda V. Braun, R. N. It is not right that the nursing profession should suffer for the low ideals and poor service of some of its members. The great body of graduate nurses might well emphasize its real position and its real ideals.

A report issued in July 1918, by the Governor-General of Korea states that there are 759 licensed physicians in private practice, of whom 525 are Japanese. Of the 283 hospitals in the country, 258 are private. Medical licensing examinations were held twice in this year and were passed by seven Koreans and seven Japanese. Only the

Japanese and Korean languages are used in these examinations and neither English or any other foreign tongue. This is of interest in connection with the protest in this Journal against medical licensing examinations being given in the Japanese language in California. Candidates not speaking Japanese or Korean are required to take their examination in Tokyo and then transfer to Korea, and have their Japanese license recognized by the local government. The most serious single disease in Korea seems to be distomiasis of which 39,401 cases occurred in this year. Many tropical as well as the diseases of cool climates are found.

PHYSICIANS—REPORT COMMUNICABLE DISEASES WITHOUT DELAY.

Special Articles

THE NEED FOR A STATE HOSPITAL SCHOOL FOR INDIGENT CRIPPLED AND DEFORMED CHILDREN.

By HARRY LESLIE LANGNECKER, M. D.,
San Francisco.

Most physicians and many laymen, realize the necessity for better treatment and care of indigent crippled and deformed children. Those members of the medical profession who are intimately interested in the treatment of these correctable defects, understand better than anyone else, the lost opportunities in the neglected and untreated cases. Not until last year, has any definite means been taken to ascertain approximately how many children in this State, might be classed under the handicapped group. A survey of cripples [1] under the age of eighteen, was successfully made by the California Federation of Women's Clubs, and a brief review of this report is worthy of comment. Although the desired information had to be gathered from a variety of sources, still, the investigation of 2148 authentic cases demonstrates the imperative need for action. When it is possible to compile complete statistics of the indigent crippled children in California, the number will be astonishing. Further investigation should be undertaken with means and methods provided to treat, educate and care for these children. Give them the best possible chance to mature with the least physical handicap. Should not the state do this for its future citizens?

One only needs to review the remarkable work done in Massachusetts,[2] and Minnesota,[3] to convince the skeptical that such an extension of welfare work, is no experiment, but of real value. Within the past year, since national attention has been focused closely on the physical condition of our children, abundance of evidence confronts us, regarding this matter. Many states heretofore uncertain about the importance of this issue, have made provision through the State Health Departments, for special attention to these cases.

The following letter written to me by a crippled child's father, tells a story not only in this particular instance, but as the reader will recall, could be told of many similar cases. "When Albert C— was sixteen months old he had whooping-cough and fever at the same time. Dr. W— attended him. When he felt better he tried to walk, but was quite lame. A few days later he was not able to walk at all. The doctor said he had infantile paralysis. I wasn't satisfied to let the child go, so took him to Sacramento, to Dr. W—, and he said the same thing. Then I tried Dr. W— of Roseville, and he also said it was paralysis and it would be hard to cure him. He wanted to try electric treatments, but they didn't do any good. Then I couldn't afford to spend any more money, so was forced to let him go for a while. He crawled around on the ground. We tried many remedies that others suggested, but he always remained the same. I heard of L— Hospital, about eight years ago, and the good it did for many crippled children, and was anxious to take my boy there. I went down, taking Albert with me. The physician examined him and said his legs were in a bad condition, and he thought an operation would help him. He said to come back the next day. I went back. He said if I would leave Albert in the hospital and let him operate on his legs, he could help him quite a bit. But he wanted a price quite beyond my means, and I was forced to let it go; so I took him home again. Four years later I went to the L—Hospital again, and this time you examined him and advised an operation. I told you my circumstances, and only hospital expenses were charged to me. Both legs were operated upon and, after a while, Albert was able to stand on one leg. He was in the hospital three months, and then came home wearing two braces, and he was able to bear his weight pretty well. I took him back several times, and now one leg is quite strong and he wears no brace on it. The other still has a brace but it is getting stronger, and he is able to walk without his crutches."

Is it not our duty to see that such children have the best possible care and treatment? When the importance of these facts are truly realized, then facilities must be originated to better these children.

In the larger cities most of the children requiring corrective treatment may and do attend the larger free clinics, where men specially trained in this branch of surgery correct the faulty condition. Here too the valuable assistance of the Social Service arranges for the funds necessary for the supporting apparatus so frequently required, and even visit the home of the child, in order to carry on effectively the treatment and encourage parental interest in the improvement of the child. But with all these free opportunities open to the city crippled child, frequent relapses occur through lack of realization of the condition by the parents. Bad hygiene and environment, poor and faulty nourishment, frequent change of address, non-attendance at the clinic or inability to attend school are the things the surgeons have to contend with.

1. Survey of Crippled Children in California by California Federation of Women's Clubs.
2. American Journal Care of Cripples. Vols. 1 to 5.
3. The Advantage of a State Hospital for indigent, crippled and deformed children. American Journal Orthopedic Surgery. Vol. XIV, May, 1916.

In the sparsely-settled districts or smaller communities the need is the greatest. For deformities and disease-crippling conditions are most likely to be found in the poorer farming regions. Here, where towns are few and far between, physicians scarce and medical care inadequate, early recognition and treatment is often impossible. The extremely deformed cases may attract public attention and be sent to a city hospital, the expense borne by the county or some philanthropic individual. Difficulties in these cases arise owing to the distance from the place of treatment, or infrequency of medical observation and inability to carry out the corrective exercises or muscle training. The many opportunities of the city child are all denied the country child.

The treatment of these cases necessitates good hospital facilities, daily observation, adjustable braces, muscle training, corrective exercises over a long period of time. The modern medical knowledge of to-day can do much to correct deformities and improve diseased conditions of the bones and joints, and the period of treatment is in many cases greatly reduced; but frequently, and especially in the most severe cases, education can not be carried on during this time, on account of the inability to go to the ordinary school. The best treatment is the only treatment for these cases. Therefore an institution should be established for the treatment, care and education of these children. Any indigent child who may have resided within the State of California for not less than one year, who is crippled or deformed, or suffering from disease through which he is likely to become crippled or deformed, the disease or deformity amendable to treatment, should be eligible. The application for admission should include an affidavit as to the financial status of the parents, or guardian, and a statement as to the deformity and condition of the patient by the physician. Here an effort would be made to correct the deformity. Treatment continued as long as necessary, constantly under the observation of skilled physicians. Proper nourishment given, and according to ability to receive instruction, the educational side carried on in a most thorough and expeditious manner. In directing the treatment to ultimate cure, attention given so that the boy or girl departing takes with him or her a trade sufficiently learned to be self-supporting.

Under the present arangement, the care of these cases is hit or miss. Those cases receiving treatment are helped in proportion to the interest of parents, the ability of the clinics to hold the patient during the long period of treatment, and the activity and alertness of the Social Service to keep in touch with the patient, assisting the whole family in many and diverse ways to accomplish the one object, namely, the correction of the child's deformity. The element of education is often neglected, and the possibility of self-support in after life is a questionable matter.

Therefore the establishment of a state hospital school for crippled and deformed children will mean the best medical efficiency to the patient, to his family, the community and thereby to the state.

DEATH FROM ACCIDENTAL POISONING BY CARBOLIC ACID.

U. S. Flagship "Pensacola" (2nd Rate)
Panama, February 23, 1872.

Thomas Russell, Nurse, age 23 years, native of Ireland.

The following is a correct account of the affair as far as can be ascertained, viz:

About 4:50 o'clock this p. m. the Apothecary, Chas. O. Hanlon, and Russell, were engaged in arranging the medicines on one of the shelves in the locker in the Dispensary of this ship; the Apothecary turned towards the door to speak to one of the men, and while speaking, his back was toward Russell, who continued his work. The Apothecary states that his back was not turned longer than ten seconds, when hearing an unusual noise behind him, he turned immediately, and seeing Russell in the act of falling, he caught him, laid him down, and sent at once for assistance. Dr. Flint and myself were in the sick bay, we repaired immediately to the Dispensary, seeing the patient within one or actually two minutes, he was then totally insensible; pulseless. Pupils dilated, the respirations were of a gasping character, face pallid and pinched, and, there had been an involuntary discharge of urine. The interval between the respiratory acts became longer, and, after one or two partial efforts, life ceased, respiration continuing for several seconds after the cardiac impulse ceased to be perceptible. There were no convulsions nor vomiting, nothing beyond the condition above described. The fatal event occurred so rapidly that there was not sufficient time for the manifestation of any further symptoms, nor was there an opportunity for the exhibition of any remedial measures. The fatal event occurred in about three minutes from the time the Apothecary heard the first noise.

There was a strong odor of carbolic acid in his breath, but no trace of it about his lips or face. Upon examining the medicines upon the shelf, a bottle of the capacity of one pint, and about two-thirds full of "Acid Carbolic Impure," as furnished by the U. S. Naval Laboratory, was found without the cork in it. As no one saw him drink anything, and as he did not speak or show any signs of consciousness, the natural inference was that, the moment the Apothecary turned away, he hurriedly took up the bottle and swallowed some of its contents by mistake for some stimulant. He was in the habit of drinking whenever an opportunity occurred, and on this account he was never allowed to dispense liquor. The supposition of the accidental origin of the poisoning was strengthened by the fact that a bottle of the same size, containing Tinct. of Ginger was found standing close to the Carbolic Acid, and, as the allowance of Tinc. of Ginger had been nearly used, and could not be accounted for in a legitimate way, it is more than likely that he had been in the habit of taking it, and intended so doing upon this occasion. It was impossible to ascertain the quantity swallowed, but from the manner in

which it was done, it is likely that not more than one ounce was taken.

The body was allowed to remain during the night, a small quantity of ice being placed on the abdomen.

February 24.—Post mortem examination was made at 6 o'clock this morning, thirteen hours after death, rigor mortis well marked, body well nourished, skin pallid, with some post mortem discoloration along the back, no evidence of commencing decomposition. Owing to the inconvenience attending such examinations on board ship, although every facility was afforded me, it was concluded only to examine the stomach and brain.

Upon opening the abdomen, the odor of the Carbolic Acid was very perceptible, and the viscera were in a good state of preservation. The stomach was moderately distended, and intensely congested externally, being of a dark venous hue, it was removed entire, after ligating its cardiac and pyloric extremities. Upon being opened it was found to contain about one pint of a whitish colored liquid, smelling strongly of the acid, and some undigested food having also the same odor. After removing the contents, the whole of the mucous lining gave positive evidence of the corrosive effect of the poison, showing the characteristic white appearance seen after the local application of the undiluted acid. Beneath this white film, the mucous membrane was intensely congested, of a chocolate color, strongly corrugated and much more rigid and tougher than normal. This condition was especially well marked in the oesophagus, in the cardiac extremity and along the greater curvature, and to a less degree along the lesser curvature and at the pyloric extremity, although no part of the inner surface had entirely escaped.

The skull was opened in the usual manner. The scalp and meninges of the brain were very much congested, the vessels being filled with fluid blood of a dark color. There was no effusion of blood or serum either beneath the membranes nor in the ventricles, and with the exception of a very few bloody points of small size in the cerebrum, and some infection of the choroid plexus, the remainder of the cranial contents seemed to be in a normal condition.

The most marked feature in this case, was the rapidly fatal result, it might be almost termed "instantaneous," as from the most careful estimate, not more than three minutes could have elapsed from the swallowing of the acid until death ensued. I scarcely know of any poison capable of producing death in so short a time, except, possibly strong hydrocyanic acid, the symptoms from poisoning from which, I may add, closely resemble those noticed in this case. Having advanced thus far in the history of this interesting case, it may be well to inquire, and if possible, to form some idea of the mode by which Carbolic Acid is capable of destroying life so rapidly.

Two modes have suggested themselves, viz.:

1st—By its powerful irritant effect, applied, as in this case, instantaneously to the whole lining membrane of the stomach and oesophagus, thereby causing "death from shock," in the same manner as a blow upon the epigastrium, or

2nd—After absorption, by its anaesthetic and paralyzing effect upon the sympathetic and pneumogastric nerves and their connections, thereby destroying or suspending their functions, and bringing about cessation of vital action in important organs supplied by them, as the brain, heart and lungs.

It is a well established fact that Concentrated Carbolic Acid when applied to the skin produces decided anaesthesia. Dr. W. H. Jones, U. S. Navy, now attached to this ship, has upon several occasions applied the acid to the skin of his forearm with the effect of lessening its sensibility in about twenty seconds, to such an extent as to allow the part to be fully incised without pain. It has been used on board this ship, upon several occasions for mitigating pain in opening buboes, and always with good effect. If it causes anaesthesia when applied externally, there is no reason why the same effect should not be produced when applied internally, and it therefore seems reasonable to suppose that the rapidly fatal effect of Carbolic Acid, in this case, can be accounted for in satisfactory manner by its anaesthetic and paralyzing effect upon the great nervous center, subsequent to its immediate absorption from the stomach. Had life been prolonged, or the dose been smaller, doubtless, vomiting, purging and other evidences of its action as an irritant poison would have been observed, but as death occurred too rapidly to be caused by its mechanical effect, or corrosive quality, it seems reasonable to infer that the second proposition is probably correct, and the modus operandi of a fatal dose of Carbolic Acid can be referred to the explanation therein contained.

Respectfully submitted,
W. E. TAYLOR,
Surgeon, U. S. Navy.

Original Articles

THE SURPRISING FREQUENCY OF HYPERTENSION IN A GROUP OF YOUNG DRAFTED MEN.*

By WALTER C. ALVAREZ, M. D., San Francisco.
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During the last few weeks of draft board work I measured the blood pressures of 264 recruits taken consecutively as they appeared for examination. There were 87 between the ages of 18 and 21, and 167 between 32 and 37. There were a few between 22 and 31. Although the number of cases studied is small, the results are so startling that it seems worth while to report them, if only to raise questions and to stimulate others to make similar studies on larger groups of young people.

The commonly accepted view seems to be that hypertension is a disease of fairly old men who

*Read before the Forty-eighth Annual Meeting of the Medical Society, State of California, Santa Barbara, April, 1919.

have broken down with overwork, or who are suffering from focal infections, autointoxication, nephritis, etc. The last census report states that one out of every five deaths is due to cardiovascular-renal disease. When do these serious defects first make their appearance? Have they just developed when the physician finds them at 45 or 50; or were they there in childhood and youth? I feel satisfied that we can recognize them in childhood if we will look carefully and then not ascribe everything we see to focal infections. One of the big surprises of this war has been the great frequency of cardiac insufficiency in men who have passed the draft and the induction examiners. Even among the carefully picked aviators Whitney[1] found over 5 per cent. who had to be rejected. Men wonder why they have not seen these cases in practice. I believe thousands of them never feel sick enough to consult a physician. Other thousands are not examined carefully and are treated for "nerves," "autointoxication," "indigestion," or what not. Others are studied intelligently, but the slight abnormalities found are often considered trivial and of no significance.

The following table (Table 1) shows the systolic pressures of 265 recruits arranged according to age. I have chosen 130 mm. as the dividing line between normal and abnormal because years of attention to this point have convinced me that pressures of 130 or more are associated sooner or later with some symptoms.

It will be seen that there were more men with systolic pressures over 130 than under (201 to 64). Of the 19 year group there were 6 with pressures of 150 or over; of the 20 year group there were 15 over 150 and 3 over 170. Three men in the 34 year group had pressures over 190, and a 36 year old man was unaware of the fact that he had a pressure of 275.

These results seemed so incredible at first that I spent considerable time looking for sources of error. As I was using a Tycos manometer, I compared it frequently with the Mercer instrument which I use at the office. If anything, the Tycos readings were a little lower than those with the mercury scale. The pressures were taken before the exercise and with the men standing. Many were very nervous and others were shivering from cold. Little difference could be found, however, in individual readings when some of the tests were repeated with the recruit warm, less nervous and lying down. To answer objections, we might deduct 10 mm. from all the readings and still we would have surprising results.

The most satisfying proof of the essential accuracy of the blood pressure readings appeared when Table 2 was made up. This showed that whereas most of the men with low pressures were normal cardiovascularly, most of those with hypertension had other signs of heart and arterial inferiority. Many had enlarged, irritable hearts which showed poor responses to exercise; others were more or less cyanotic, and others had been rejected by recruiting officers because of questionable or evanescent murmurs. Unfortunately uranalyses were not obtained. At the office I find that people with

TABLE I.

Blood Pr.	Age 18	19	20	21	23	25	26	27	28	29	30	31	32	33	34	35	36	37
200-275	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
195-199	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—
190-194	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	1	—	
185-189	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—
180-184	—	—	1	—	—	—	—	—	—	—	—	—	—	2	—	—	1	—
175-179	—	—	1	—	—	1	—	—	—	—	—	—	—	2	—	—	—	—
170-174	—	—	1	—	—	—	—	—	—	—	—	—	—	1	2	1	1	—
165-169	—	—	2	—	—	—	—	—	—	—	—	—	2	—	1	—	1	—
160-164	—	1	3	—	—	—	—	—	—	—	—	—	—	2	4	3	5	1
155-159	—	2	3	—	—	—	—	—	1	—	—	—	2	1	2	2	1	—
150-154	—	3	4	1	—	—	—	—	—	—	—	—	1	4	2	3	1	—
145-149	—	6	8	—	—	—	—	—	—	—	1	—	2	5	3	3	5	2
140-144	—	6	4	1	1	—	—	—	—	—	—	1	2	4	2	2	4	—
135-139	1	5	3	4	—	—	—	—	—	—	1	—	1	2	3	5	2	—
130-134	1	3	1	1	1	—	—	—	—	1	—	—	3	9	—	7	3	1
100-129	—	9	8	4	—	—	1	1	—	—	—	—	5	11	9	7	8	1

TABLE II.

Systolic Pressure.	Apparently Normal.	Abnormal.	Per Cent Normal.	Per Cent Abnormal.
100-129	51	13	80	20
130-135	21	25	46	54
136-140	7	22	24	76
141-145	10	25	29	71
146-150	5	21	19	81
151-155	3	7	30	70
156-160	4	18	18	82
161-165	1	10	10	90
166-275	0	22	0	100

even slight increases in blood pressure occasionally have traces of albumin, and almost always a few red blood cells in the sediment.

It will be noticed in Table 2 that 10 of the men with normal pressures appeared to have some cardiovascular deficiency. Some showed a slight enlargement of the heart; two had tachycardia, two were chronic alcoholics; one was very nervous; another was a deformed little man with rotten teeth and bad varicose veins, and three had valvular disease.

Following are some examples to show the way in which the notes were made. The pulse readings were taken just before hopping about 100 times on one foot, just after, and two minutes later.

TABLE III.

Age.	Blood Pressure.	Heart Pulse.	Enlargement.	Cyanosis.	Remarks.
20	165/98	84 132 96	†	†††	Irregular pulse. Systolic murmur.
34	138/95	100 132 110		††	Gray haired old man; looks 50. Marked art. scler. Bad varicose veins.
20	165/110	96 144 108	††		Pale edematous face of nephritis.
20	170/110	84 120 84	†	††	Second aortic markedly accentuated.
20	160/90			††	Underweight. A nervous wreck.
20	164/100	110 165 130	†		Still wets the bed. Has had "kidney trouble." Blind in one eye. Dyspnœa on exertion. Heart shakes his chest.
36	160/85	144 180 132	††		Heart markedly overacting. Tachycardia.
34	170/105	140 180 150	††	††	Dyspnœic. Tachycardia.
19	145/94	108 156 108	†	†††	Mitral systolic murmur.
33	134/80	120 132 120		††	After lying down a while pulse was 106.
33	145/90	90 100 96	†††	†	Edema of the legs. Professional bicycle racer.
20	175/90	96 132 100	††	††	Heart shakes his chest. Boy is underweight.
20	150/85	120 160 144	††	††	Dyspnœic. Tachycardia.

DISCUSSION.

The best explanation for this high incidence of cardiovascular disease would seem to be that I was dealing with a selected group of men. That, I feel sure, was the case. Many of those below 21 had tried to enlist and had failed. Healthier and more ambitious youths had managed to get into the various branches of military service before the second draft was begun. Those men between 21 and 31, and some of the others were caught in slacker raids and were in custody when examined. Most of those between 32 and 36 were Class A men, unmarried, without dependents or productive occupations. Some had tried to enlist, but many appeared in the light of slackers because they had remained at home without responsibilities to keep them there. One must conclude, then, that a large percentage of slackers are physically unfit and below the average. I believe many of them are slackers because of this physical (and often mental) unfitness.

One of the worst features of hypertension is that early in life it may make the individual uneasy and apprehensive about his health. It is the only abnormality I can find in hundreds of so-called hypochondriacs. Some people are like a man driving a big new car; they feel no concern whatever about the machine. The victim of hypertension often resembles a man driving an old second-hand machine; every rattle and squeak worries him and takes the pleasure out of his trip. He feels like stopping at every other garage to make sure that he is not going to have a breakdown. My experience with industrial accident cases has shown me that when these men with high blood pressure are injured it is very difficult to get them well; they are so pessimistic and so sure that they are ruined for life that it is very hard to get them started to work again. Of course there are exceptions to this rule. I recall three women in particular who keep at their work sensibly and unconcernedly in spite of pressures around 250 mm. There apparently are different types of the disease in which nervous, arteriosclerotic, nephritic or cardiac symptoms predominate.

A large number of the men in the group studied were unmarried and I believe many were so on account of their hypertension. A man who is uneasy about his future and who spends a good part of his spare time fussing about his health is likely to avoid the extra incumbrances of wife and family.

I believe that if blood pressure readings had been demanded for all recruits the allied armies would have been spared much of their trouble with "irritable hearts." Most of the writers on the subject hardly mention blood pressure; a few state that it was normal; others dismiss the subject with the statement that it was generally higher than normal but not enough to have any significance. Robey and Boas, in an excellent article on "Neurocirculatory Asthenia," give the pressures as usually between 135 and 170[2]. I believe even the slight increases have significance. The mistake we make is to think of the hypertension as primary. In that case we could disregard it until it reached 175 or 200, where it could put a heavy strain on the heart. The rise in blood pressure cannot be primary—it must be but one of the signs of a hereditarily defective cardiovascular system. It might be said that in certain families "the contractor has put in poor materials"; one dies with apoplexy; others have nephritis, angina, diabetes, heart-disease, arteriosclerosis, flushings, etc. The children have polyuria, transient albuminuria, heart disease, and nephritis after contagious diseases. These statements are based upon a large series of family histories which I hope to publish some day. Dr. James Mackenzie describes these individuals under the heading of the "X" disease. He calls it that because he does not know what it is. He speaks of the cold hands, irritable temper, irritable heart, mental peculiarities, and digestive disturbances which he says his colleague Arbuthnot Lane calls ileostasis[3]. I might add in passing that anyone who wants to study the early stages of cardiovascular disease should become known as a gastroenterologist. The heart specialist gets some of the final wrecks and the people with murmurs. Many even of the final wrecks go to the gastroenterologist. The most difficult work I have to do is to differentiate between the flatulence, epigastric pain, nocturnal distress, large tender liver, icteric tint and loss of weight due to gall-bladder disease and the flatulence, epigastric pain, nocturnal distress, large tender liver, icteric tint and loss of weight due to a failing high-blood-pressure heart. Often the patient's blood pressure has already dropped nearly to normal when he consults a physician; often there are no murmurs, and not infrequently he has both cholecystitis and heart failure. Sometimes the loss of weight is so rapid and the clinical picture of gastric carcinoma so well imitated that the family physician refuses to accept my X-ray findings, ignores the changes in the cardiovascular system,

TABLE IV.

	No Cyanosis.	Cyanosis Present.†	Cyanosis Marked.††	Marked and Widespread.†††
Number of Cases.	151	34	68	12
Average Pressure.	137.7	143.2	149.0	156.0
	Of these 15 had pressures over 160.	Of these 6 had pressures under 130. In 2 no explanation was found. One had mitral regurgitation. One was a chronic alcoholic. One showed sexual infantilism. One was underdeveloped and underweight.	Of these 9 had pressures under 130. In 2 no explanation was found. Two had tachycardia. One showed a poor pulse response and an enlarged heart. One was markedly neurotic. One had mitral regurgitation. One was prematurely senile. One was underweight.	Of these 1 had a pressure under 130. He had pulmonary tuberculosis.

and orders the patient to his death by the way of an exploratory laparotomy.

ENLARGEMENT OF THE HEART.

A remarkable feature observed not only in these recruits but in scores of cases seen in practice is that the enlargement of the heart and widening of the aorta is out of all proportion to the amount of pressure. The X-ray will often show pronounced bulging of the arch with pressures around 135 mm. of mercury. Only recently I saw an example of this in a boy, the son of an advanced nephritic who already, at the age of 14, has a large heart, a definitely widened aorta and a systolic pressure of 127. Another, a girl of 17, who has lost several relatives with nephritis, has a large heart and a pressure of 200 mm. In neither of these cases is there any sign of focal infection, syphilis, or valvular defects.

In the group of drafted men there were 79 with slight cardiac enlargement and 27 with marked enlargement. The average pressure in the first group was 147.7; in the second group 166 mm. In the first group there were 14 with pressures of 130 or less. Of these, one had a high diastolic pressure and was probably a nephritic; two had a poor pulse response to exercise; two had tachycardia; one had mitral regurgitation; one was a chronic alcoholic, and seven showed no cause for the enlargement. Three of the seven had cyanotic hands. Of the men with marked enlargement only one had a pressure under 130 and he had tachycardia.

It is an interesting fact that a number of the men with high pressures had such good compensation that they could engage successfully in athletics. One man with a pressure of 145/90, a great big heart and edema of the legs, was a professional bicycle racer.

Some of the worst pulse responses were seen in the alcoholics. There were 14 of these in the group with an average pressure of 145. A painter of 34 had good arteries and a pressure of 125/90. Hereditary good kidneys probably saved him from harm.

A VALUABLE SIGN OF THE HYPERTENSIVE DIATHESIS.

This study has brought out the value of what seems to be a hitherto almost unrecognized sign of hypertension. When these men were stripped in a cold room the hands and legs of some of them would soon be markedly cyanotic. In some, the cyanosis of the hands was a striking feature when they came in. For months before I began taking the pressures on *every* case I had been picking out high pressure men almost unerringly by this sign. The following table (Table 4) shows that it is not infallible unless perhaps when it is pronounced. In the worst cases it is marked not only in the hands but on the backs of the legs and thighs and on the face. The cases were arranged in groups as follows:

This table shows that one can easily miss cases of hypertension by relying upon this sign alone; but when it is present and well marked there is almost always some abnormality of the cardiovascular system. I have seen it quite marked in young children where perhaps it will be found to have prognostic significance.

Major Robey is the only one I have found so far who seems to appreciate the value of this sign. In the discussion on his paper last year he said: "If the man has tremor, rapid heart and cyanosed hands, with a history, then it is quite clear that he comes within this group and should not be accepted."

VARICOSE VEINS.

There were 10 men in the series with varicose veins. I suspected that the poor material might be found not only in the arteries but in the veins, but the data obtained from this group are inclusive. The systolic pressures were as follows: 125, 126, 132, 136, 136, 138, 142, 145, 150, and 156. The average is 138.6, which is lower than that for the group as a whole. My impression is that the men with varicose veins seen in the first draft generally showed hypertension, but unfortunately I did not keep notes. It may be that this condition is more common in people with slight hypertension than in people with normal or very high pressures.

BLINDNESS IN ONE EYE.

It is an interesting point that five of these young men were practically blind in one eye. As I remember, most of them could count fingers at from 3 to 8 feet. Their pressures were 135/90, 145/90, 150/90, 175/120, and 180/118. I have seen many similar cases in practice. Most of these men testified that the defect had been discovered accidentally; that oculists had remained puzzled as to the cause, and that no help could be secured from glasses. I am sorry to say that I have no reports from the oculists as to the findings in these cases. Two of the men with high diastolic pressures may easily have had retinal hemorrhages.

SUMMARY.

A large majority of a group of young men called in the second draft showed hypertension. This was often associated with an enlarged, irritable heart, a poor pulse response to exercise, and cyanosis of the extremities.

Many of these men were slackers; some were in custody. Many were bachelors and practically all were without responsibilities or productive occupations.

It seems likely that many of these men had evaded the responsibilities of life because they were physically defective.

Marked cyanosis of the extremities is proposed as an important sign of hypertension or of the hypertensive diathesis.

Hypertension must be watched for not only in the aged but in the young. The writer considers it as one sign of a hereditarily defective cardiovascular-renal system.

References.

1. Whitney: J. Am. Med. Assn., 1918, 71, 1391.
2. Robey and Boas: J. Am. Med. Assn., 1918, 71, 525.
3. Mackenzie: J. Am. Med. Assn., 1918, 71, 529.

AMINO ACIDS AND HYPERTENSION*

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The metabolism of matter and the formation of wastes, are normally supported by the food, but if no food is taken, these processes still continue at the expense of the body substance. The expenditure of energy, which is never ceasing in the living body, includes the work involved in carrying on the internal processes which are essential to life itself, and the expenditure of matter cannot cease, as the energy for this necessary work is obtained by the breaking down of organic compounds of the food, or of the body into simpler compounds, some of which are of no further use and must be eliminated, while others form the building materials from which the body structure is renewed. When the food supplies sufficient energy, the body substance is protected. When the food is insufficient, body substance is burned as fuel. Therefore, we must know whether the fuel requirements of the body have been fully met before we can intelligently consider its nutritive requirements. Carbohydrates, fats, and proteins all furnish fuel, but protcins alone serve for maintenance and growth of body tissue. However, as amino acids are what the body needs and not proteins as such, there must be a definite amount of that class of proteins which contain all the amino acids, since the human body cannot synthesize them, and a lack of either may make it impossible for the organism to manufacture its own tissue protein, and in consequence it suffers a kind of starvation.

Nutrition has been studied from different angles and by many different methods, and still there is much to be learned. The method which at present is engaging the most attention is that which seeks to follow the chemical composition of food in its course through the animal organism. This includes a biochemical analysis of the component parts of the various foods, especially of the proteins.

Until within the present century all proteins were regarded alike in dietary value, and Liebig, Voit, Pflüger, and Rubner in turn advanced their views of protein metabolism, all of which were finally disproved by Folin and others,[1] who also demonstrated the fact that protein disintegration was accomplished in the digestive tract by a series of hydrolytic splittings, and that nitrogenous nutritional requirements could be supplied by a mixture consisting of the products of hydrolysis of the protein molecule. Dogs were fed on the products of the self-digestion of the pancreas, and on this diet, which contained not a trace of protein, body weight was maintained. It has since been demonstrated that life can be supported upon a diet consisting of a suitable mixture of amino acids.[2] A boy with an esophogeal stricture, on whom gastrotomy had been performed, was fed per rectum on the digestive products of meat, obtained through the combined action of trypsin and erepsin. Not only was nitrogen equilibrium maintained, but the body weight increased. Such experiments, Underhill[3] claims to be conclusive evidence, that we must regard the amino acids as food stuffs which are sufficient for the nitrogenous needs of the body and that the nutritive value of any protein is dependent upon the content and character of its amino acids.

The protein molecule is digested by the action of pepsin, trypsin, and erepsin down to amino acids in the digestive tract. This action, however, is a gradual one and more in the nature of a slow erosion than that of a rapid explosion. There are eighteen individually distinct amino acids which, though they resemble one another structurally, cannot substitute each other. Chemically, they are organic acids in which one or two atoms of hydrogen have been replaced by the amino group NH_2. According to Van Slyke,[4] the most striking characteristic, which is common to all amino acids, is the occurrence in the same molecule of an amino group with the basicity like that of ammonia, and an acid group with an acidity like that of acetic acid (hence the name amino-acid). He likens the entire protein molecule which is a chain of amino acids to a long train of automobiles all with the same black uniform bodies, but with tops of eighteen different shapes, and of three different colors, according to whether their properties are acid base or neutral. Chemically stated, the complete digestion of a protein molecule consists in splitting or breaking this long chain into shorter chains, the albumoses, then into still shorter chains, the peptones and peptids, and finally the individual amino acids of which it is composed. Until within the past five years, nothing was known of the fate of the amino acids after they left the intestinal tract. At that time, Van Slyke states, the mechanism of protein nutrition stopped short against the intestinal wall. Folin and Van Slyke[5] later proved beyond question that amino acids were normally absorbed directly into the blood from the intestines, and from the blood distributed to the tissues without further chemical change, those not needed for synthesis being changed by a process of diamination into ammonia and urea, the carbonaceous residue being transformed into carbohydrates, yielding energy. The tissues absorb amino acids rapidly, but never completely. The blood, normally, always contains about 0.1%, while the tissues contain ten times this amount. The free amino acids stored in the

*Read before the Forty-eighth Annual Meeting of the Medical Society, State of California, Santa Barbara, April, 1919.

1. Folin: American Journal of Physiology, 1905, 13, p. 45.
2. Abderhalden: Zeitschrift fur physiologische Chemie, 1912, 77, p. 22.
3. Underhill: The Physiology of the Amino Acids, 1915: Yale University Press.
4. Van Slyke: Donald Archives Internal Medicine.
5. Folin & Van Slyke: Journal A. M. A., 1914, 63, p. 823.

tissues may be regarded as a form of reserve food. This reserve, however, does not disappear during long fasting. On the other hand, they tend to increase during starvation.[6] These facts are believed to indicate[7] that the amino acids are intermediate steps, not only in the synthesis, but in the breaking down of body proteins, and that autolysis is the main source of free amino acids found in the fasting body.

The urea formation while taking place in every tissue of the body is accomplished mainly in the liver. That organ is the principal factor in absorbing amino acids from the blood stream and also in the chemical transformation which precedes the elimination of urea. Van Slyke and Meyer state, that the liver, also, constantly desaturates itself by metabolizing the amino acids that it has absorbed, and thus maintains indefinitely its power to continue removing them from the circulation, so long as they do not enter it faster than the liver can metabolize them. If they enter too rapidly, or if the liver function is lowered, the amino acids increase in the bood, and the kidneys assist by excreting them unchanged. An excess, therefore, of amino acids in either blood or urine, might indicate a lowered function of the liver. Indeed amino acids have been given as a test for functional activity of the liver. It has also been stated, that mild cases of diabetes, while lacking the ability to oxidize glucose, still possess the power to change amino acids to glucose, and that a lack of this ability might be taken as an indication of lowered liver function. All of these results tend to change our older theories of metabol ism as Underhill observes, and it becomes evident, that in any consideration of protein transformation within the organism, either in health or disease, amino acids are the substances which demand attention. Moreover, he adds, that at present the investigations are being narrowed down to the point of the determination of what actually occurs with the individual amino acids and what special role in the body nutrition, each one plays.

The defective proteins which are incapable of supporting life or promoting growth, are found to be lacking in one or more of the amino acids. It has been recently shown[8] that physiologically active substances are formed from amino acids, and if the main nitrogenous element in the diet is one of the defective proteins, there may be an imperfect functioning through failure to supply the raw materials needed by certain glands to elaborate their specific products. The normally functioning thyroid gland contains an iodine compound, which is believed to be formed from tryptophane. Therefore, if the protein in the diet contains no tryptophane, a corresponding disturbance of this gland may result. Adrenaline, a physiologically active substance, is probably derived from tyrosine and a continued lack of this amino acid in the diet would indirectly lower the function of the adrenals, resulting in certain abnormal symptoms, but differing from those of starvation. The pituitary gland also manufactures a physiologically active substance which is derived from the amino acid, histodine.

As before stated, the cleavage of the protein molecule occurs in the digestive tract, by the activity of the enzymes normally formed there. This cleavage, in general, resembles the products of putrefaction caused by the activity of bacteria. Bacterial activity, however, causes a different type of products; the specific substances formed are chemically different, and of necessity occur in different parts of the intestinal tract, since it has been found that little or no putrefaction takes place in the small intestine, and that practically no proteoses or peptones are ever found to pass the ileo-caecal valve. It would therefore seem that amino acids, principally, are concerned in the putrefactive processes in the intestinal tract, and, moreover, that this putrefaction occurs in the large intestine only. We are familiar with the putrefactive products of the aromatic amino acids, tyrosine and tryptophane, which are first deaminized, then further torn to pieces by the activity of bacteria to form the familiar substances, indole, skatole, phenol, and the oxyacids. The chemical reactions are the same with each of these amino acids, first ammonia is split off, then carbon dioxide, and finally oxidation and demethylation takes place, but from tryptophane, we have as a result, the malodorous bodies, indole and skatole, while from tyrosine are formed phenol, paracresol, and the oxyacids. These products are easily detected and as a rule are a fairly good index of the extent of intestinal putrefaction, but they are only a small portion of the substances which may be actually formed and absorbed from the intestinal tract. Indeed with no detectable indole or phenol, there may be formed from tryptophane and typrosine extremely toxic substances which are also characteristic of putrefaction. The splitting off of carbon dioxide by the so-called carboxylase bacteria, may occur either before or after deamidation. If it occurs before, compounds known as amines are produced, which are highly toxic and act principally upon the nervous system. These amines exert a powerful effect upon blood pressure and are believed to cause thickening of the artery walls. In 1907 Dixon and Taylor, using an alcohol extract of placenta, observed that when injected intravenously into animals, it caused a marked rise in blood pressure, and also contractions in the pregnant uterus. However, it was shown later that these symptoms did not occur, if the placenta had not first undergone putrefaction. Emerson had already isolated a similar substance from the so-called self-digestion of the pancreas, but it is now believed that this substance also was formed through bacterial agency. This particular body is known as para-oxyphenylethylamine or tyramine, and is produced from tyrosine by the liberation of CO_2. Tyramine resembles epinephrine chemically, and exerts a similar influence upon the sympathetic nervous system, though weaker in its action. It is found outside the body in a variety of cheeses, as Camembert, Roquefort, and in some American

6. Van Slyke: Archives Internal Medicine.
7. Van Slyke & Meyer: Journal of Biological Chemistry, 1912, 12, p. 399; 1913-1914, 16, p. 187, p. 213.
8. Alsberg: Lectures on Nutrition, 1916, Washington Academy of Sciences.

cheeses, and is the active principal of ergot. From leucine in a similar manner may be formed isoamylamine, while from tryptophane is produced indole ethylamine. Histamine, a very powerful toxin, is formed (by the action of putrefactive bacteria) from histidine. Its action on the nervous system produces symptoms identical with those of anaphylaxis. In like manner the diamines, cadaverine, putrescine, and tetramethyldiamine are formed respectively from lysine, arginine, and ornithine.

It becomes evident, therefore, that in a study of hypertension, we must reckon with not only the amino acids, but with the bacteria concerned in intestinal putrefaction. During the past three years in making observations on the flora in intestinal putrefaction we found that we could change the flora at will by changing the diet, and that coincidently with a continuous carbohydrate diet there was a disappearance from the urine of the absorption products of putrefaction. More recently, Kendall, of Northwestern University, has demonstrated that the intestinal flora are definitely related to the diet of the host, also that putrefaction may be retarded by a carbohydrate diet, and records some interesting facts as a result of his experiments. He reminds us that the bacillus bifidus which is obligately fermentative, requiring carbohydrates, is characteristic of the flora of nurslings, producing a constantly acid reaction. As the child becomes older and the diet includes more protein, this type of bacteria decreases and there is a remarkable increase in the colon bacilli which are facultative and can grow equally well on either protein or carbohydrate pabulum. The entire life cycle of these bacteria is carried on within the intestinal tract of its host and the metabolism of both microbe and host are similar in many respects. The products of the metabolism of normal intestinal bacteria are harmless, but according to the diet of the host, even a colon bacillus, which is a lactic acid bacillus, may play a dual personality. If it becomes necessary for a colon or a proteus bacillus to utilize proteins for energy, an enzyme is formed, the function of which is to prepare the protein product for assimilation, and in accomplishing this, certain chemical changes take place, as various substances are split off in order to find the carbohydrate residue necessary for the energy of the bacteria. If, however, utilizable carbohydrate is available for their energy, these enzymes are not formed. The chemical products of many of the pathogenic bacteria, in the presence of utilizable carbohydrates, are identical with those of the lactic acid bacilli, while these same organisms, if grown in carbohydrate-free media, form their specific highly toxic products. The protein sparing effect of carbohydrates, so well known in the metabolism of the human body, is here demonstrated in the metabolism of bacteria, and this fact is well worth our consideration, since we may thus shift the metabolism of intestinal bacteria by supplying available carbohydrates for their energy with a resulting formation of benign products.

During the past eighteen months we have made observations on a number of patients with varying degrees of hypertension. These observations, which have extended over periods of weeks or months, consisted of daily examination of feces, daily study of body metabolism, together with functional tests of liver and kidney. Some of these patients had lowered kidney function, others had lowered liver function, some had both, while still others had neither, but all responded promptly to a carbohydrate diet by a lowering of the blood pressure and a lessening of the products of putrefaction. Proteids were gradually and carefully added, but only up to the actual body requirements, always watching the effect upon the intestinal flora, providing for normal intstinal motility and keeping the carbohydrates so much in excess that they could not all be absorbed from the upper intestinal tract, thus insuring plenty of available suitable pabulum for the necessary energy of the intestinal bacteria.

At the present time lowered kidney and liver function, lowered pancreatic function, anemias and a number of other diseases are being cured by a proper adjustment of diet, and now hypertension may be alleviated or cured in like manner, simply by preventing the amino acids which have safely passed through the fires of protein metabolism, from being torn to pieces by the intestinal bacteria to furnish their necessary energy. Verily we live around the digestive tract.

A STUDY OF ONE HUNDRED AND FIFTY CASES OF HYPERTENSION.

By ROLAND CUMMINGS, M. D., Los Angeles.

The subject is so extensive that we have limited our studies to the etiology and the treatment as carried out in the cases reported. It seems best here to define some of the terms or expressions which will be used throughout the paper.

Apical abscesses are spoken of only when the X-Rays have unquestionably demonstrated an abscess at the apex of the root of one or more teeth. The expression "bad teeth" refers to teeth that are crowned, or to a condition, which, from the appearance of both teeth and gums, is suggestive of root abscesses, but in which no X-Rays were taken.

The statement of a positive history means that one or both parents have died of apoplexy, uremia or heart failure. Moderate sclerosis refers to the radials, which, when empty, are palpable. Moderately severe sclerosis refers to radials which are becoming tortuous. Severe sclerosis to those becoming tortuous and beaded; while very severe designates a pipe-stem condition of the blood vessels.

By the term "nervous," we refer, first, to a group of patients with nervous temperaments who are high strung, intense, always keyed up to a high pitch, always on the go, never relaxing, whose motors always run at high speed. This group doesn't know how to play, but are Rooseveltian in that they are intense in all they do and a vacation means a change of but more strenuous work. These patients are always prompt at their appointsments, are exacting, and in business very successful. The second group compose women who are in the menopause period.

The following cases reported were a group of

patients seen by Dr. Dudley Fulton and myself during the past four years, whose systolic blood pressures were 160 or above, and upon whom we had sufficient data to warrant a study.

Of the 150 patients, 129, or 85 per cent. were between the ages of 40 and 70 years. Eighty-four, or 56 per cent., were females, while 66, or 44 per cent., were males.

One hundred and thirteen of the 150 belong to the nervous group. Forty-five of these being patients (women) in the menopause period. Ninety-six of the 150 used no tobacco, while but two of the remaining gave a history of using it to excess. One hundred of this group were total abstainers, and but three gave a history of liquor abuse. Sixteen patients were afflicted with over-eating, and 17 with obesity. Thirty-one, or 20 per cent., had apical abscesses and 32 had bad teeth. Chronic constipation was present in 65, or 43 per cent.

The Wassermann test was done in 52 cases, being negative in all but one instance.

Thirty-five patients had the distinct signs of infected tonsils. How many more had this same condition, I do not know, but undoubtedly a goodly number.

A complete urine examination was done in 136 patients, a trace of albumin being found in practically all. Casts were present in but forty, however. Of 57 subjects upon whom the phthalein estimation was done 43 were normal and 14 below normal. The blood nitrogen was estimated in 44, being above normal in but six.

To classify the series into those who have a primary nephritis hypertension, and those who have a hypertensive cardio-vascular disease, according to Janeway's classification, we find thirty in the former group and 120 in the latter.

It has been almost one hundred years since Bright called attention to cardiac hypertrophy in nephritis. During this time there have been a thousand and one theories advanced to account for this condition and the accompanying increased blood pressure, but almost all have been disproven.

Von Bash, about one-half century ago, was the first to experimentally measure blood pressure, but it was twenty years before instruments were perfected so it could be estimated clinically.

There are two theories that persistently cling regarding the cause of hypertension, theories that are thoughtlessly held to-day.

First. That this condition is due to arterio-sclerosis.

Second. That increased blood pressure is synonymous with, and usually preceded by nephritis.

It has been definitely proven that primary arterio-sclerosis is not accompanied by hypertension, and that the sclerotic changes found in patients with high blood pressures are the results and not the cause. It has also been proven that the majority of hypertensions are not preceded by a nephritis.

Experimentally there are certain things that will increase blood pressure, such as barium chloride, lead poisoning, adrenalin, some portions of the incompletely oxidized proteid molecule and glomerular nephritis.

Lead poisoning will produce a perfectly typical picture of hypertension, followed by sclerosis of the blood vessels and the development of interstitial changes in the kidneys.

Many have clung to the theory of a toxemia of intestinal origin, but have never isolated the toxins. General credence is given, however, to the belief that blood pressure will be greatly raised by spasms of the splanchnic vessels as a result of constipation.

Those who think of arterio-sclerosis and hypertension synonymously, look to overeating, the abuse of liquor and tobacco, overwork, improper exercise, etc., as great causes. Others, as Martin Fisher, think infection lodging in the vasovasorum produces this condition.

The theory is also advanced that excessive innervation or stimulation from the nerve centers increase vascular tone, thus tending to push pressure up.

Bittorf has advanced the theory that hypertension is due to a disease of the depressor nerve or its endings in the aorta; thus messages that are sent to the brain which bring back a vasodilator response, are shut out.

One of the most fascinating and clinging theories has been that of increased activities of the supra-renals. The legs have been gradually knocked from under this by the inability to demonstrate any disease of the adrenals in hypertension, by the inability to find an increased amount of adrenalin in the blood in hypertension, and by the fact that the adrenals have been removed without a drop in pressure taking place for two or three days. Changes in other internal secretions have been advanced, but no definite proof has been forthcoming.

Increased blood viscosity was thought to be a cause for years but this bubble has burst since viscosity has been found normal in hypertensions.

General infections, as syphilis, typhoid, etc., appear to produce increased pressure at times, but these causes are certainly rare in comparison to the frequency of the condition. Many other less possible causes are mentioned. In fact, when I look into the literature on this subject I am reminded of a reviewer, who, after reading a dissertation upon a certain disease, exclaimed "we would ask what the conditions are which do *not* bring on this malady."

In the group of thirty patients whose increased pressure was due to kidney disease, I have included the prostatic obstruction cases also. This then, leaves 120, or 80 per cent. of the subjects whose hypertension was due to causes other than renal disease. This group belongs to those designated under the term "Hyperpyresis" by Albutt and the presclerotics of Huchard. I confess to find, upon looking the histories over, so few belonging to this group of primary renal hypertension.

I do not wish to be understood that none of the patients not belonging to this group had nephritis, for many of them did. In fact, all who

had had a high pressure for several years had all the signs of interstitial changes in the kidneys.

The group designated as being nervous, number 113, or 75 per cent. Subtracting the 45 who were in the period of the menopause, still leaves 45 per cent. of the entire number of patients. This, it seems to me is very striking, and if a larger series would still hold to the same proportion, would be a very suggestive hint as to the basic cause of the greater percentage of hypertensions. Some one will say that the nervous symptoms were the result of the increased blood pressure. To those I would emphasize the fact that the nervous symptoms greatly antedated the possibility of an increase in blood pressure.

How the nervous state caused a gradual pushing up of pressure is a question, the answer of which is not at present clear, but that it does do this I have no doubt. It is certain that there is either an increased vasomotor stimulus of central origin, or a hypertensive substance in the blood. If the adrenalin theory were true matters would be greatly simplified. No doubt being nervously strung up, strenuous and intensive in man is analogous to fear in the animal. According to naturalists, when an animal is scared there is an immediate pouring out of adrenalin, which causes the mobilizing of blood sugar and an increase of blood pressure. Thus the muscles are supplied freely with energy for fight or flight. The fear soon passes and the animal returns to normal.

In the nervous type of man this same condition in a modified form is constant, hence, with a continuous over secretion of adrenal substance bathing the vessels from month to month, would it not be natural for the pressure to gradually rise? To me this is an interesting theory, but by no means proven.

With the group whose pressures arose during the period of menopause, it is reasonable, especially since it is so large (30 per cent. of the entire series) to reason that the increased blood pressure is a result of the things that cause the menopause which is probably based upon a change or partial cessation of ovarian function.

Such a large percentage have apical abscesses and bad teeth, 40 per cent. combining both groups, that it makes food for thought. How great a factor this condition is can only be ascertained by greater study.

Infected tonsils belong in the same category as infected teeth. About 25 per cent. of the series had undoubted chronic tonsillar infection. This number is great enough to be seriously considered from an etiological standpoint.

It also seems plausible that, inasmuch as 43 per cent. of the whole number suffered from chronic constipation, this condition has a distinct bearing on hyptertension. Splanchnic spasms seems the mode by which this condition operates. However, the splendid work of Alvarez notwithstanding, it is difficult not to believe that occasionally one sees a patient who is absorbing a hypertensive substance from the bowel.

Our series would lead us to believe syphilis played a small part in producing hypertension. Wassermann reactions were done on all suspicious cases, yet but one out of 52 was positive.

In discussing the treatment I wish to make it clear that high blood pressure per se was not treated, but it was considered as a leading symptom, just as fever is in certain diseases.

In those cases whose etiology was a nephritis, and in the patients who had developed marked interstitial changes in the kidney, due either to increased pressure or the things that produce it, the importance of sustaining pressure was realized and measures were used accordingly.

It is useless and even dangerous, to try to reduce a pressure of 200 when the radials are beaded and tortuous, the urine contains albumin and casts, and when there is a greater night than day output, with a low fixed specific gravity. In a condition of this kind the treatment should be aimed at good elimination and a support of the heart muscle. Pressure is thus sustained.

It is in the nervous group, when gotten early, that real results may be secured. The treatment must be based upon the removal of the causes. Apical abscesses must be removed; free bowel drainage must be instituted and maintained; all points of infection, whether from appendix, tubes, gall bladder or tonsils, must be removed. A complete rest cure, and if necessary, a re-education of the patient's nervous system from a nervous to a more phlegmatic temperament, must be undertaken. With this group bromides are the supreme vaso-dilators, and one will find a lowering of blood pressure in just the proportion that nervous relaxation is obtained. Whether this medicine works by lessening nerve stimuli or sedating adrenal activity, or in neither of these ways, I do not know, but when combined with rest it works.

An observation of the use of thyroid extract has been very interesting. Repeatedly there have been pressures which, from the amount of cardiac hypertrophy and radial changes, one would think should be 150 systolic and 90 diastolic, but would persist around 170 and 100, which, upon the exhibition of five grains of fresh gland daily, would rather quickly subside to a safer level.

In connection with this we might recall that Sajous claims thyroid extract neutralizes adrenalin secretion.

The most happy results are obtained with women in the menopause period. Almost constant complaints with these patients are general nervousness and hot flashes. It is seldom that bromides, rest, and an empirical mixture of thyroid, ovarian and corpus luteum extracts will not only relieve the hot flashes and nervouness, but cause the blood pressure to drop to the region indicated by the amount of vascular sclerosis and cardiac hypertrophy. My observation has been that blood pressure drops as hot flashes disappear.

A case in point was a woman of fifty years who had had the best medical attention a good-sized California city afforded. She had been told she had a high blood pressure, and that all she could do was to lead a quiet life, avoiding all stress and excitement. Her pressure was 220

systolic and 120 diastolic; hot flashes were extremely annoying; she was generally nervous; a very poor sleeper; had been constipated for several years, and had three apical abscesses. Her last show had been several months back. The radials were palpable; her heart had increased 10 to 15 per cent. in size; but there were no signs of kidney interstitial changes. Three months of rest, with the judicious use of bromides, internal secretory products, removal of the diseased roots, with diet to regulate the bowel drainage, served to reduce pressure to the region of 155 systolic and 85 diastolic, at which point it has remained for nine months under a reasonably active life.

In conclusion I might add the following lessons and impressions received during this study.

Nephritis does not play so important a part in hypertensions as was formerly believed.

There is a large group having increased blood pressures who can be cured if gotten early, and greatly relieved if gotten later. All possible causes must be carefully searched out and radically treated, e. g., apical abscesses, chronic tonsillitis, chronic constipation, gall bladder or appendix inflammations, all pelvic and prostate infections, as well as the proper treatment of thyroid diseases. In addition, nervous habits must be changed, which in itself may mean the complete re-education of the patient. Too much emphasis cannot be placed upon insisting that a proper amount of rest and sleep be had.

The great frequency of increased pressure at the time of menopause. Every woman should have her blood pressure frequently taken during "the change," especially if hot flashes and nervousness are present. The marked relief of these symptoms by the use of bromides and internal secretory extracts, has been most gratifying. And finally I wish to emphasize the importance of sustaining blood pressure to the point indicated by the amount of kidney involvement.

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PARALYSIS OF THE ESOPHAGUS.*

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Paralysis of the esophagus is a comparatively rare condition. In effect it is a stenosis, as the esophagus acts solely by segmentary stimulation. Gravity plays no part in the passage of a bolus to the stomach. This is shown in the ability of the individual to swallow quite as well when inverted. When however a motor paralysis exists no solids or liquids can pass to the stomach. Paralysis of other muscles of deglutition, such as the inferior constrictor, and the palatal muscles is frequently associated with esophageal paralysis.

Jackson classifies the paralysis of the esophagus as follows:

(1) Toxic type: such as diphtheritic paralysis.
(2) Purely functional: as in hysteria.
(3) Peripheral paralysis: as in neuritis.
(4) Central paralysis: usually from bulbar lesion as in glosso-labio-pharyngeal paralysis. The latter condition may be luetic. Jackson states that neuritis may also be luetic in origin but this is incorrect.

The differential diagnosis as between esophageal paralysis and other forms of stenosis is comparatively easy.

(1) General physical history of the patient: as presence of lues, etc.

(2) History of onset: No history of possible foreign body obstruction. Usually sudden onset: No pain on attempts to swallow or in intervals.

(3) Examination of the patient by both indirect and direct methods. By indirect examination with the laryngoscopic mirror the pyriform fossae are seen to be full of saliva (Jackson's sign for stenosis). In the absence of sensory paralysis this results in spasmodic coughing on attempted swallowing on account of overflow into the larynx.

By direct examination with the esophagoscope, there is an absence of resistance to a full sized instrument at the physiological constrictions, and chiefly at the crico-pharyngeus.

There may be a sensory as well as a motor paralysis present. If sensation is absent instrumentation may be done without exciting any reflex cough or gagging. Hysterical paralysis can be excluded if we have an absence of the normal contraction at the crico-pharyngeus. A cause of esophageal paralysis not mentioned specifically in Jackson's classification is due to occlusion of the posterior inferior cerebellar artery. While a comparatively rare condition, some thirty cases have been reported by various writers, the syndrome is so definite and one might say almost dramatic, that we should readily recognize it once we know the picture. It may be permitted at this time to review the anatomy of the parts involved.

The posterior inferior cerebellar artery is usually described as the largest branch of the vertebral artery, and in its course as passing obliquely backward around the medulla oblongata, at first between the roots of the hypoglossal nerve then between the roots of the accessory and vagus nerves, to end on the inferior surface of the cerebellum.

It has been shown recently that there is considerable variability in the course of the artery; that in many cases, instead of passing directly backward after its origin from the vertebral, it forms a distinct loop the convexity of which is towards the pons. An absence of the artery on the right side has frequently been noted.

The ascending limb of the loop usually passes upward in the posteriolateral sulcus, and in this position supplies small terminal branches to the medulla oblongata. Occlusion of the post. inf. cerebellar artery produces a definite clinical syndrome, in spite of the variability in the course of the artery, and in the number of branches it supplies to the medulla oblongata. Various investigators have shown that the lesion in the medulla extends laterally from the restiform body to the inferior olive and vertically from where the restiform body passes into the cerebellum to about the middle of the hypoglossal nucleus. The structures usually involved are the descending root of the fifth nerve, the nucleus ambiguus, the glosso-pharyn-

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geal and vagus nuclei and the ventral and dorsal spinocerebellar tracts.

The symptom complex produced by the occlusion of the post. inf. cerebellar artery is as follows: Sudden onset with tendency to fall to the affected side; no loss of consciousness; difficulty with swallowing and occasionally with phonation; loss of appreciation of pain, heat and cold over part or the whole trigeminal area on one side of the face (usually the side of the lesion) and a corresponding loss of pain and temperature sense over the opposite side of the body from the face down; touch tactile discrimination, deep pressure and muscular sense are intact; paralysis of the sympathetic on the side of the lesion, causing retraction of the eyeball, contraction of the pupil and drooping of the eyelid; ataxia of the arm and leg, usually on the side of the lesion. In the course of from three to six months practically all symptoms disappear, other than the sensory changes which usually are permanent.

Without going into detail the symptoms may be said to be caused as follows: The sudden dizziness and instability in standing or sitting can be attributed to disturbance of Deiter's nucleus and the neighboring fibres.

The ataxia of the arm or occasionally the hemiataxia, is probably due to interference with the dorsal spinocerebellar tract.

The loss of pain and temperature sense over the trigeminal area, usually on the side of the lesion results from the destruction of the descending or sensory root of the fifth nerve. The presence of touch and pressure sensation in the disturbed area of the face can be explained as suggested by Woods, by the probability that these sensations after reaching the Gasserian ganglion, enter the sensory root and go directly into the chief trigeminal nucleus, and thus escape indestruction of the descending root.

The involvment of only the first and second branches of the trigeminus, has been attributed to the fact that the first branch of the nerve descends lowest in the medulla oblongata, the second branch next lowest, and the third branch highest. A lesion involving only the lower part of the medulla would implicate only the first and second branches of the nerve.

The loss of pain and temperature sensation on the side opposite the lesion is due to involvment of the fibres which carry sensation of pain, heat and cold, these fibres having crossed shortly after entrance to the posterior horns. The area of intact sensation between the face and the disturbed area on the body, when such exists shows that only a part of these fibres are involved.

The retraction of the eyeball, drooping of the lid and contraction of the pupil usually on the side of the lesion show that the sympathetic fibres entering the lower part of the cervical cord, do not cross over until they reach the upper part of the medulla.

Case 1. The case which came under my observation, first was as follows: A. B., Male age 50. Occupation night watchman. Family history, neg. Present illness: August 2nd, 1918 went to dinner feeling slightly chilly but otherwise normal. Ate a hearty meal consisting mostly of fresh mackerel; no canned stuff. About eleven P. M. was awakened by a feeling of nausea. He made his way to the toilet with great difficulty owing to intense dizziness and inability to stand without holding on to things. For about an hour he vomited and had diarrheic movements of the bowels. On attempting to eat next morning he found that he was unable to swallow even water as attempts to do so were followed by coughing spasms. The patient was seen first in my office on August 5th at which time examination showed the following condition; his speech showed a rhinolalia aperta, which proved to be due to a paralysis of the soft palate on the right side. There was a slight hoarseness which was partially due to the fact that there was a paresis of the right cord, not complete. Some of the hoarseness I attributed to the laryngeal irritation due to the frequent cough from overflow of mucus.

Tongue normal (hypoglossal usually escapes), slight R. facial paresis, R. knee jerks absent. The pyriform fossae were seen to be full of saliva. He was sent to the hospital where I passed the esophagoscope the same day. A large sized tube was passed without any resistance at the introitus. No foreign body was seen, the only departure from a normal appearance being an edematous appearance near the introitus. There was a complete absence of ability to swallow. No sensory paralysis present. Deaf in L. ear, some years duration. I asked Dr. Walter Schaller to see the patient with the idea of ascertaining the cause of the paralysis. His report follows: Patient appears about 50 years of age. Has worked in lead formerly. Arcus senilis present in cornea and radials are palpable. Pupils irregular in contour, also unequal. L. being larger than R. React fairly promptly to light. Deaf in L. ear, said to antedate accident. R. corneal anaesthesia.

Sensibility: There are striking changes to be noted in this regard viz: In L. extremities and trunk anaesthesia to pain and temperature sense. Touch conserved. Hypo-anesthesia to pain temp. and touch in opthalmic and supr. maxillary branches of the 5th on the R. side.

Co-ordination: No noteworthy ataxia, finger to nose and heel to knee tests. Neuro muscular: No atrophies.

Diag: Occlusion of the R. posterior inf. cerebellar artery on probable arterio-sclerotic basis.

August 7th the rhinolalia aperta much more marked. A spinal fluid examination was done the report being negative for lues. In spite of this report the patient was put on Pot. iodide internally, and mercury rubs. He was fed rectally for two days and then by stomach tube during his stay in the hospital. August 14th swallowed a small glass of milk. August 23rd left the hospital at which time he was able to swallow softened bread and eggs. At the present time he can eat almost any well chewed food, but still presents the rhinolia aperta and the sensory disturbance described.

Tests of the oculo-vestibular tract were not made at the time of his acute illness, but those made later showed no abnormality.

Case 2: R. W. E. salesman aet. 55, American, was seen by a competent general practitioner in December 1918 and sent by him to the San Francisco Hospital, with a diagnosis of "stenosis of the esophagus." He was examined by another physician there on the twentieth of December and the following condition was reported. Complaint: Inability to swallow, eight days duration. Family History: Father died at 80, senility. Mother died at 70, senility. Wife healthy, no miscarriages. Past History: Used to be a fairly heavy drinker up to 20 years ago. Occasional sore throats. Children's diseases. No skin rashes. Has been tired out and worried some time.

Present illness: Two weeks ago began to have sharp shooting pains over L. eye, temporal, and occipital regions, radiating L. side of neck to chest,

and worse at night. Eight days ago when stooping over felt "as if something had snapped in his head," was dizzy and felt a choking sensation and numbness in R. arm and leg. Was able to walk about after a while and tried to eat but could not swallow. Since then has been unable to eat and even to swallow liquids. Pains in head have continued, but not so marked. For past week has been quite dizzy when making sudden movements. No incontinence of bladder or rectum. Eleven days ago had blurred vision in R. eye, with dark spots before eye and pain. No special difficulty in speaking, but it is somewhat of an effort. Smell and taste unchanged. No locomotor disturbances. Unable to distinguish heat or cold over R. side and extremities. Pupils unequal, the left being smaller. R. normal hippus. Nose and ears negative. Slight droop left corner of mouth, more noticeable when he smiles. Mouth: slight pyorrhea, much dental work. Tongue coated and protrudes to Right of mid-line. Pharynx: Mucous membrane normal, Gag reflex diminished. Neck: Some soreness of muscles on L. Side. Chest expansion good. Heart normal. Lungs normal. Abdomen and back normal. Sensation to pin gone over area supplied by the two upper branches of the trigeminal. Pin sensation over R. foot and lower right leg diminished. Partial ptosis of left eye. Left corneal anaesthesia. Voice has changed since present illness and has become nasal in character.

The only additional data that subsequent examination revealed was that his rhinolalia aperta was caused by a paresis of the left soft palate, and that there was a partial paralysis of the left vocal cord.

Examination of the internal ears showed normal reactions to all tests. Examination with the esophagoscope showed a perfectly patent esophagus, only a slight thickening about the introitus being seen. The instrumentation was done without anesthesia.

When last seen about a month ago he was able to swallow liquids in small quantities, but could not accomplish this if he swallowed too hastily. His sensory findings were as in the first examination. Paresis of soft palate much improved with consequent improvement of speech.

In conclusion it might be said that when confronted by a case of sudden inability to swallow, the syndrome of occlusion of the post. inf. Cerebellar artery, should always be kept in mind.

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REPORT OF A CASE OF THE OPERATION OF BOTTINI FOR PROSTATIC OBSTRUCTION, AFTER TWENTY YEARS,
and
REPORT OF A CASE OF THE OPERATION OF GARRITY FOR CANCER OF THE PROSTATE, AFTER SIX MONTHS.*

By GRANVILLE MacGOWAN, M. D., Los Angeles.

CASE I.

In the autumn of 1898, J. R., a physician living in Mifflinsburg, Pa., and temporarily visiting in California, after suffering for about a year at intervals with symptoms of prostatism, which for several months had required the leading of a catheter life, appeared for consultation, stating that he had read an article in which I had reported the successful use of the Bottini instrument in the relief of prostatic obstruction, and that he desired that I should carry out this treatment in his case. He was suffering, at the time, from acute cystitis, and the passage of a catheter was very difficult and very painful. An inlying catheter could not be borne.

The case did not seem suitable for this operation and I advised a prostatectomy, but he insisted on the Bottini or nothing.

Three incisions were made with the cautery on the floor of the bladder outlet. He had a very stormy time for about two weeks, with high temperature, great pain, some delirium, but in the end, the operation afforded him all the result which he desired.

The groove left permanently was sufficient to enable him to empty his bladder. The frequency decreased as the years went by. He became intellectually and physically active again. About 1906 he married. He had retained his sexual powers, up to my last interview with him, which was last December. He has returned to California every winter, and I have been afforded the opportunity to cystoscope him each year, and catheterize him; there is no residual urine, but the urine has never been clear.

The frequency is not great, four or five times during the day and twice at night. The bladder is still trabeculated. The lateral lobes of the prostate can be seen projecting into the bladder, the left being the larger, but they do not impinge upon the groove made by the Bottini.

At the time of the operation, he was fifty-eight years old; he is now seventy-nine.

In the last five years of the nineteenth century, I was using the Bottini rather frequently, having operated then altogether about fifty cases. We had not yet worked out the technique of safe prostatectomy which has been established since, as the result of the effort of many of we older men, over a period of a quarter of a century, so that the Bottini operation with all its dangers appealed to me then, as it did to other men, like Hugh Young and Cabot, as well worthy of regard.

A few years later, owing to an unfortunate accident, I abandoned its use altogether. This case stands as an exemplar of the fact that what the Italian surgeon who originated the cautery operation claimed for it, is true, which is that the operation itself could be used for the establishment of bladder drainage, that would successfully allow of the emptying of the bladder in cases of hypertrophied prostates without removal of the encroaching growths.

CASE II.

In my service at the Santa Fe Railroad Hospital in Los Angeles. F. C. B., engineer, aged 62, referred to me by reason of his inability to urinate. Symptoms of prostatism developed quite suddenly early in October, 1917; before that time, he had never had any difficulty in urinating and no history of pain, but in the interval the symptoms of prostatism had increased until when I first saw him, retention was complete.

Rectal examination showed a very large prostate, indurated, immovable on the right side and very slightly movable on the left, apparently adherent to

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the muscles of the rectum and extending out along and involving the right seminal vesicle.

Cystoscopic examination showed a bladder not trabeculated and not inflamed; the outlet was irregular in all zones, but presented no distinct bulges into the bladder.

Diagnosis—Cancer of the prostate.

An ordinary case would have been given a catheter and sent home, but this man was not teachable and there was no one in his home hamlet to catheterize him. He preferred to be operated.

The case seemed suitable for the operation, which had been devised by Dr. John Garrity for the total ablation of the prostate, in cancer, which he was kind enough to explain to me at a visit with him last June. This operation is a perineal one and differs in several features from operations devised by Dr. Hugh Young and the one devised by me, and is an improvement on both of them.

On the 3d of August I submitted him to this operation. The prostate, its capsule and both seminal vesicles were removed. The bladder neck was involved for almost its entire circumference. The cancer was removed from this with cutting rongeurs. It took a long time. The work had to be patiently done; when we ceased everything that was indurated or that felt or looked cancerous had been removed excepting a small nodule far up on the right side underneath the lateral bladder wall, which could only be felt; it could not be brought down. Two tubes were inserted, one through the urethra and the other through the perineum, coming out on the left side. On the 9th of August, the stitches were removed and both tubes taken away from the bladder; on the 16th of August, he commenced to pass urine by the urethra; on the 19th of September, he was passing all of his urine through the urethra and has continued doing so ever since.

He was examined on the 10th of September with the cystoscope, which demonstrated a clear bladder wall, and a very fair bladder neck, though there was some edema on the right side of the bladder, about the neighborhood where I did not reach all of the growth. On the 3d of January of this year, he was in excellent condition; his bladder showed a little more edema on the right side; he was holding his urine from three to four hours with a bladder capacity of 250 cm., and passing it in an excellent stream.

He was examined again on the 10th of March; at that time I could notice, with the finger in the rectum, a recurrent growth at the site of the edema in the bladder, but he stated that his bladder condition was entirely comfortable. He complained of pain over the left hypochronrium and of some cough. I made a diagnosis of cancer of the lung and possible involvement of the liver; he was referred to the medical department and Dr. Sugarman made the following report to me within the last forty-eight hours:

Chest findings: Apex at the fourth interspace, superficial dullness (cardiac) reveals heart dislocated up and left; no valvular lesions. Marked dullness over lower sternum to left lower chest. Respiratory excursion left diaphragm limited; massive dullness basal left with marked reduction of vesicular breath sounds. Thoracentesis shows sero sanguinous effusion. X-ray, chest dense shadow in inferior mediastinum sharply defined nodules (size of walnut), scattered through left lung.

Diagnosis: Mediastinal tumor of malignant origin.

I must say, with regard to such operations, that after having performed a number of successful resections of the prostate, meaning by that, that the individuals have retained their urine, have urinated freely and emptied the bladder for at least a time, as I am doubtful as to whether they are justified in the premises. Nearly always metastasis has already taken place before the process in the prostate has so far advanced that it can be almost absolutely determined by the tactile sense alone.

While the disease may be locally cured, the surgery performed, exhausting, long, tedious as it is, really does not, in the end, pay, because it does not lengthen the individual's life nor does it greatly increase his comfort, and, as a rule, I am inclined to advise against such operations.

Dr. *Molony of San Francisco and Dr. Lyons of Wichita, with several Texas and California physicians whose names I do not rembember, were present at the operation.

THE INTENSIVE TREATMENT OF MENINGOCOCCIC MENINGITIS.*

By DONALD J. FRICK, M. D., Los Angeles.

It is a peculiar fact that in medicine as in life generally we only learn by hard knocks. We do not seem to be able to apply quickly the lessons learned in the treatment of one disease to other diseases which are produced in a similar way, but have dissimilar manifestations. We have been impressed for a number of years by the advisability and necessity of intensive treatment in diphtheria, we have seen numbers of cases of tetanus recover following the employment of the "Rational" method of Ashurst and John, pneumonia Type I has been treated with large amounts of the specific serum with wonderful results, but not until we were placed face to face with the virulent epidemic of meningitis of last winter did we use our knowledge gained in these other diseases and evolve a satisfactory plan of intensive treatment. Report of the Surgeon-General, U. S. Army 1918, shows there were 600 cases with mortality of 26.83% for the last four months of 1917.

The preliminary report of Major Herrick in the Journal of the American Medical Association and his later extended report in the Archives of Internal Medicine advocating the combined intravenous and intraspinal treatment should have awakened every one of us to the necessity of intensive treatment, but from the reports of cases of chronic meningitis, cases needing intraventricular drainage with introduction of serum, cases still being treated with intraspinal injections alone or

*Discussed by Drs. Brem, P. R. Brown, Fulton, Roblee, Oliver, Frick.

with serum intravenously in a half-hearted way, it is evident a wider knowledge of modern treatment is necessary to safeguard the patient with epidemic meningitis. This is my excuse for presenting a discussion of the treatment of the last twenty cases of meningitis at Camp Beauregard.

Capt. Landry and Capt. Hamley have reported in detail the first 126 cases and from their article statistics for comparison will be taken. These statistics are briefly given here, so that we may show the reason for the plan that was worked out and followed in this last small epidemic of the disease.

From November 10, 1917, to June 1, 1918, there were 126 cases with a mortality of 48.26%.

1. The first 83 cases were treated by the intraspinal method alone, with a mortality of 54.2%.

2. Nine cases were given intraspinal treatment with serum intravenously late, with a mortality of 55.5%.

3. Thirty-four cases were treated with the combined intravenous and intraspinal method, with a mortality of 32.3%.

These last 34 cases were treated with 60 cc. of serum every 24 hours for three doses; more was given if the blood still showed a positive culture. Thirty to forty cc. of serum were injected intraspinally every 12 hours until the temperature was normal. With this plan results were not satifactory, the death rate was too high, two cases developed a positive blood culture late in the disease, one on the thirty-sixth day of the disease after having been up and around the ward, the other on the sixteenth day following an intercurrent Type I pneumonia which had responded to the Type I serum. And there were nine or ten cases who developed a post-meningitic neurosis which made them invalids for nine or ten months after their disease was over.

It is probably conceded by every one that the disease is a blood stream infection with local manifestations in the cerebro-spinal system. This is proved by the recovery of the meningococcus in the blood stream before there are any changes in the cerebro-spinal fluid, and very few signs of meningeal involvement. The blood stream may stay infected for variable periods, just as it does in pneumonia. And as we find in different epidemics of pneumonia, larger or smaller percentages of cases with a septicæmia, so do we find varying percentages of cases of blood stream infection in different epidemics of meningitis. The argument advanced that, because petechia is an infrequent incident in some epidemics, and blood cultures positive in only a small number of cases, the disease is not primarily a septicæmia, is no more tenable than to deny in the case of pneumonia or typhoid the presence of a primary septicæmia because there is a variable percentage of cultural findings. This variability is well illustrated by our statistics on pneumonia at Camp Beauregard. During the period June 1, 1918, to September 1, 1918, blood cultures were made on all cases of pneumonia, percentage positive 20.6%. During the epidemic of influenza 108 cases of pneumonia had blood cultures made, 50% were positive. As it is a blood stream infection, and as we cannot judge how long the blood stream will stay infected and what organs may be affected, it is necessary to use serum intravenously continuously and intensively.

Because we do not believe the choroid plexus is pervious to serum, and because the serum must be brought in direct contact with the meningococcus, it is necessary to give serum intraspinally early and in sufficient amounts to control and destroy all bacteria in the cerebro-spinal fluid.

Our first plan had not proved effective and we believed it was a partial failure because we had not used enough serum in the first few days of the disease. We knew from experience in pneumonia that serum was not dangerous if properly used, we therefore outlined the following plan:

All suspicious cases of meningitis to be immeditely punctured, if the spinal fluid is cloudy or the symptoms seem definite 30 to 60 cc. of Anti-Meningococcus serum is given.

One cc. of serum is injected under the skin at the same time for the purpose of desensitization.

One and one-half to two hours later, if the meningococcus is found in the spinal fluid, 100 cc. of serum is given intravenously. The first 15 cc. given at the rate of 1 cc. per minute. A certain percentage of cases can only take a portion of this dose on account of serum shock.

The intraspinal injections are to be repeated every eight hours for six doses. After this the interval to be decided upon according to the condition of the patient. Intravenous injections of 100 cc. to be given every 12 hours for three or four doses, every 24 for two doses if the case still has fever, and one or two doses at 48 and 72-hour intervals if thought necessary.

A brief analysis of the 20 cases seen in October, November and December is here given:

The cases here reported came following the epidemic of influenza in September and October. As the epidemic of the year before began in November, and as meningitis was endemic in Louisiana and had become epidemic during several years from 1904 to 1917, we were constantly on the watch for cases and were not taken by surprise when they came.

Sixteen were white and four were colored. All had been in the service over five weeks and therefore probably contracted the disease in the army.

The first case came in on the 9th of October, four were admitted on the 12th, one on the 14th and four on the 16th. The rest being scattered through November and December.

CONDITION ON ADMISSION.

Ten were unconscious, three were stuporous and semi-conscious, seven were conscious.

INITIAL SYMPTOMS.

The mode of onset in 18 was obtainable. Nine had chills; 16 had severe headaches, 7 of these headaches being frontal; 17 had severe backache; only one had photophobia; 5 had nausea and vomiting; 4 had cough, coryza and generalized aching.

OBJECTIVE SYMPTOMS.

The signs on admission were as follows: Three had contracted pupils; 4 had dilated pupils; 13 normal pupils. In 10 cases the pupils reacted to light; 5 no test made; 3 no reaction; 2 had had mor-

phia before admission; 19 had rigidity of the neck; the other case developed it two hours after admission. Kernig's sign was present in all cases. Four cases had exaggerated reflexes. Babinski's sign in 6 cases. Retraction of head, 16 cases. Petechia was present in 13 cases, 7 times on feet and legs, 3 times on the shoulders, 3 times over the whole body.

SPINAL FLUID.

Spinal puncture was done immediately on admission. Amount of fluid removed ranged from 20 to 65 cc. Nineteen of the fluids were cloudy, 1 was bloody. Pressure was increased in every case (capillary tubing was not obtainable, so no measurement of pressure could be made). Bacteria were found in 15 cases on first examination, in four cases on the second examination. Polymorphonuclear cells made up from 76 to 99% of cells present on the first examination.

BLOOD CULTURES.

Six cases had positive blood cultures; 12 cases had negative blood cultures; 2 cases had no report made on them on account of contamination.

SERUM TREATMENT.

All patients were desensitized and given serum intravenously and intraspinally. Serum given intravenously was usually diluted with equal parts of normal saline solution.

Seventeen recovered cases—4 had 3 intravenous injections averaging 250 cc. for each patient; 10 had 4 intravenous injections averaging 405 cc. for each patient; 1 had 6 intravenous injections receiving 490 cc.; 1 received 7 injections totaling 615 cc.; 1 received 8 injections or 810 cc. Average number of doses=4.3, average amount of serum=406 cc. Three fatal cases: One received 7 doses totaling 685 cc.; 1 received 4 doses totaling 400 cc.; 1 received 1 dose of 70 cc. Average number of doses 4, average amount of serum 385 cc.

Intraspinal injections were given in all cases after drainage of the cerebro-spinal system.

Seventeen recovered cases received from 11 to 39 doses. The minimum amount of serum being 210 cc.; the maximum 1020 cc. Average number of doses 19.8, average amount of serum 492 cc.

Three fatal cases: 1 received 1 injection of 45 cc.; 1 received 7 injections of 170 cc.; 1 received 25 injections of 622 cc. Average number of doses 11, average amount of serum 279 cc. The minimum amount of serum given to a recovered patient was 435 cc., the maximum amount 1635 cc.

RESULTS.

Seventeen cases recovered, three cases died—a mortality of 15%.

COMPLICATIONS IN RECOVERED CASES.

One broncho-pneumonia—cured.

One bilateral pyelitis—cured.

One arthritis—serous effusion into knee joint, aspiration with injection of 10 cc. of Anti-Meningococcus serum with recovery.

One arthritis right elbow—recovery.

THREE FATAL CASES.

First case lived 48 hours after coming to hospital; second case lived five hours after coming to hospital, was sent in unconscious having been found on the ground in this condition. No history was obtainable and length of time of symptoms before removal to hospital not known. Third case was in hospital 19 days, but was complicated by syphilis, as shown by a history of chancre 14 months before and a double plus Wassermann.

TIME IN HOSPITAL.

Seventeen recovered cases averaged 57⅛ days in the hospital. One case was discharged at end of 31 days; 2 cases remained in hospital 90 days.

EXERCISES BEFORE DISCHARGE.

All cases before discharge were given setting-up exercises and made to do a five-mile hike without fatigue. This criterion was decided upon as we had found in the former epidemic that we had a great number of returned cases with a post-meningitic neurosis. All having about the same group of symptoms—pain in back, inability to march or drill, inability to bend forward, and immediate fatigue with any exertion. Twenty of these former cases had to be sent to a special hospital for reconstruction. This extra period of training necessarily prolonged the stay in hospital, but was well worth while and should be a part of the treatment of every case of meningitis.

SUMMARY.

1. Twenty cases of meningitis are here reported with a mortality of 15%.

2. Intensive intravenous and intraspinal treatment was used in all cases reported.

3. The 17 cases that recovered were well on discharge and able to do duty.

4. All the cases were of moderate severity. Fifty-five per cent. had a petechial eruption; 30% had a positive blood culture and 50% were unconscious on admission.

CONCLUSIONS.

1. All patients with positive signs and symptoms of meningococcic meningitis should be given both intraspinal and intravenous injections of serum.

2. Intraspinal injections of 30 to 50 cc. should be given every eight hours for six doses and then at less frequent intervals as needed.

3. Intravenous injections of 100 cc. after desensitization should be given every 12 hours for three or four doses and then every 24 or 48 hours as indicated by the condition of the patient and by the findings in the blood cultures.

4. Large doses of serum both intravenously and intraspinally at frequent intervals can do no harm, and will lower the mortality, prevent serious complications, and shorten the period of convalescence.

5. The withholding of intravenous serum injections until late in the disease, or giving of small doses at long intervals has no more rational basis than the giving of small doses of 1000 or 1500 units of antitoxin in diphtheria or 20 to 30 cc. of Type I serum in Type I pneumonia at intervals of 24 hours.

6. All of our serious complications, long

drawn out cases, ventricular blocking, and high mortality are probably due to too small doses of serum, given at too long intervals.

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EMPYEMA—TREATED BY DAKIN'S SOLUTION.*

By GUY COCHRAN, M. D., Los Angeles.

I have nothing either brilliant or new to add to the many empyema studies recently made. The severity of the disease has differed throughout the many scattered cities, camps and hospitals almost as much as the types of treatments and techniques. So reports and conclusions are just as varied. However, it seems worth while that reports should come from everywhere in order that out of the composite something may be learned.

At Navy Base Hospital No. 3, on the North Sea, we had twenty-eight cases, but they occurred before, during and after the influenza epidemic, representing all the types—I think—and were all treated along the same line. During the epidemic our influenza cases all showed streptococcus haemolyticus, pneumococcus and influenza bacilli; the predominance of one over the others determined early the prognosis, for the haemolytic cases mostly died in from six to twenty-four hours, before empyema developed, whereas the others lived. So in our empyemata we had only four haemolytics with ten penumococcus and eleven influenza, and three chronics with mixed infections. Only two of these (influenza) cases went to the operating room, and these were the only resections done. The others were too sick to move, and were operated in bed, for we realized early that the cases sent in from the fleet, or who had endured railway journeys all did badly, and in many the cyanosis and prostration was much too great to justify lifting to a cart and hauling to the operating room and back.

One per cent. novocain solution was the anaesthetic used.

The incision was intercostal—three or four inches long, at the lowest level shown by the pictures and other findings—mostly commonly the 8th interspace—post axillary line.

The opening through the pleura was of sufficient size for exploration and to receive a hard rubber tube, a centimeter in diameter, for drainage; also a smaller one alongside it through which the C. D. tube entered. Usually one tube was sufficient by changing the position of the patient. The large drainage tube is important, for the breaking down fibrinous clumps would plug a smaller one.

Irrigation was given every two hours with Dakin's Solution for the first few days, or until the pus and drainage ceased and temperature was normal—when the irrigations between 10 p. m. and 6 a. m. were discontinued. Later these were reduced to twice daily. By this time all tubing was withdrawn, and the irrigations were done through a catheter until we got sterile smears and a reddish tinge appeared from the granulation tissues, when the wound was allowed to close.

No secondary closures were made.

No suction or negative pressure apparatus was used.

The patients were over-fed as much as practicable. They were given no exercise beyond deep breathing, but were got up as early as the wound sealed and given work they were able to do about the wards. We found no difficulty with lung expansion, for the Dakin's Solution dissolves the fibrin, and limiting bands do not exist.

The shortest irrigation period was twelve days and the longest twenty-one days.

We took over our hospital from the British Army, and with it a number of patients too sick for transfer. Among these were three old empyemata. They were of special interest to me, for they were of a type which we had seen in civil life, and had always been so difficult. Also because they were the first chest cases in which I had ever used irrigation of any type.

Case No. 1. J. T. McC. Had been operated upon ten weeks before. The incision and resection of rib had been made posteriorly, and apparently with arm extended, for the angle of the scapula lay in the middle of the wound, making it extremely difficult to keep a tube in. There were copious drainage (while the tube was in)—a mixed infection with a lot of pyo-cyaneous stain in the dressings. His temperature ranged from 100 to 103. Under novocain his wound was enlarged—fibrous bands broken down and a large drainage tube inserted. Irrigation with Dakin's Solution as in acute cases. In eight weeks he was well.

Case No. 2. W. M. J. Similar in many ways; had been operated upon six weeks before. He ran an irregular, high temperature for a time, until we found a pocket and got a tube into it. He was well in seven weeks.

Both of these had been pneumococcus cases.

The third case, J. C. P. Shrapnel in right lung two years previously. He had been operated upon six times—the last being an Estlander. Like the others, he ran irregular and high temperature until his wound was enlarged and bands broken and irrigation started. We had several pocket formations with him, and bad times for a few days, but in four months he was well and went home. I have had a letter from him since my return, telling me how fine he feels. So I believe that he has remained well. An interesting incident in his case was apropos of the C. D. solution in fistulous cases. For weeks the dissolving fibrin had come away in lumps with each irrigation, until one day I was called in a hurry to find him in extreme paroxysmal coughing immediately following his

*Read before the Forty-eighth Annual Meeting of the Medical Society, State of California, Santa Barbara, April, 1919.

irrigation, and he told me he felt and had a taste just as when he was gassed two years ago. And he was right, only instead of the Hun, I had given him the chlorine.

This little paper is deliberately superficial—its only object being to emphasize the importance (1) of disturbing these patients as little as possible, (2) of a very simple technique, (3) of the success of irrigation, even in old mixed infection cases, (4) of feeding as much as possible, (5) of getting them up as soon as the wounds are sealed, and (6) of not losing any patients.

THE PATHOGENESIS OF PACHYMENINGITIS DUE TO NASAL OPERATIONS, WITH REPORT OF CASES.*

By ANDREW B. WESSELS, M. D., San Diego.

That there are relatively infrequent deaths following intranasal operations is shown by a review of the literature. Considering the number of nasal operations done, one wonders why meningitis as a complication is so seldom reported by the surgeon. In reporting my own case and putting on record three other cases operated on by other surgeons, but which have not been reported, I do so with the idea of getting closer to the pathology of the ethmoid labyrinth. It seems to me not enough attention has been paid to radiography in sinus work. Many of the deaths reported in the literature might have been obviated had the surgeon had a radiograph before attempting intranasal instrumentation. The possibility of brain involvement resulting by continuity, though bones and dura mater are intact, has been demonstrated (Hajek). In operations on the middle turbinate, infection can readily spread by way of the porous, poorly resisting ethmoid labyrinth. Removing polypi may open up diseased periosteum and bone with possible extension into new areas for absorption into regions always dangerous. Similarly, operations intranasally on frontal sinus, the bone structure of which may be atrophied through extension, might infect the meninges. The transmission of microorganisms through the blood stream from the nasal cavities has been established (Hajek and Flexner). There is a direct relation between the perimeningeal lymph-spaces and the lymphatics and the nasal mucosa by way of the cribriform plate of the ethmoid. Downward prolongations of the subarachnoid space, which forms a net work around the olfactory filaments as they pass through, other prolongations also pass through quite independently of the olfactory nerves. By means of these prolongations direct communication exists between the subarachnoid space and the lymphatics of the upper portion of the nose (Andre). When the condition of the nose is considered, in disease of the sinuses, with the bones sclerotic, porous, or atrophic, is it a wonder that oftentimes the slightest instrumentation will result in meningeal involvement through fracture? Unfortunately, all deaths from meningitis following nasal operations do not go to autopsy, hence the location of most frequent perforation and fracture is not available.

In analyzing the available literature on intranasal operative deaths, from meningeal complication, it seems that the operations directly on the ethmoid labyrinth are responsible for the largest number, perhaps because it is most frequently operated upon. The radical external frontal sinus operation is not considered here, although intranasal frontal sinus instrumentation is responsible for quite a number of deaths, due to fracture of the inner wall of the sinus or extension through the bone or perforation through the cribriform when no frontal sinus exists. The apparently simple operation for the removal of portions of the middle turbinate appears to be responsible for a large number of deaths either by direct fracture through the ethmoid and cribriform plate or by extension of infection through blood stream and lymphatics. The submucous operation on the nasal septum, which ordinarily is simple and would appear not at all dangerous, is responsible for its quota of deaths, this by hematogenous and lymphogenous extension.

Any operation of the nose, no matter how slight it has been, may be fatal through complication, by producing a recrudesence of an old latent meningitis or a meningitis by infection through an old perforation or dehiscence in either the ethmoid labyrinth, cribriform plate, or internal wall of the frontal sinus. The infection, once it reaches the cranial cavity, whether through the cribriform or frontal sinus, is usually found in the frontal lobe in the basal portion or anterior or median region (Freundenthal).

I. The writer saw in consultation a patient who, as the result of a nasal operation, died of a meningitis. The anterior tip of the middle turbinate had been removed, the bones were sclerotic, and there was a large amount of pus in both the frontal and ethmoid sinuses. The patient went into shock immediately after the operation and died on the fourth day from a pneumococcic extension.

II. A skilled operator removed the middle turbinate, which was hypertrophied and causing an obstruction. It was followed by a severe hemorrhage, tamponage was resorted to to check the bleeding. The patient died on the fifth day from a meningeal involvement. Streptococci were found in the spinal fluid.

III. The third case of meningitis following the removal of the middle turbinate was in the office of a surgeon. Patient developed meningitis and died on the seventh day. There were no postmortems on these cases.

The supposition is that in these three cases, there was a fracture into the cribriform plate through the ethmoid labyrinth after simple operations on the middle turbinate. Apparently the patients were in good health prior to operation.

IV. A second cruise man of about thirty-two years of age was referred to me because he was "dopey." He seemed to be unable to hear commands given by his drill master, and was very slow in executing any order. He complained of moderate headaches extending over a period of

*Read before the Forty-eighth Annual Meeting of the Medical Society, State of California, Santa Barbara, April, 1919.

years. On examination, the nose was found to be filled with polypi and it was almost impossible for him to breathe. With the idea of giving him breathing space, the polypi only were snared out. A radiograph taken previously showed right frontal sinus and both ethmoid labyrinths opaque. The idea was at a later date to clean out the ethmoid and drain the frontal sinus. Tamponage was not needed. On the fourth day, Dr. Little, neurologist of the Naval Training Camp, San Diego, saw the case and diagnosed a Pachymeningitis. The patient died on the sixth day.

Autopsy report by Dr. H. A. Thompson.

Autopsy made six hours after death. On opening skull, general softening of the bones was noted, in areas this was so marked that the scapel could cut through. The dura was adherent to bone and very much thickened and general diffuse Pachymeningitis was found. The blood vessels at the base showed general sclerosis. A rupture of the first branch of anterior cerebral artery on right side was present. There was a clot 2-5/10 cm. in diameter in center of the right frontal lobe, the tissue surrounding this involving practically the entire right frontal lobe, which was softened and necrotic. The right lateral ventricle was involved and showed a small clot. There was a small oblique fracture through the cribriform plate of the ethmoid on the right side, the bone was very thin and spongy, and the polypi could be discerned in the ethmoid labyrinth through the cribriform plate.

Cause of death. Pachymeningitis following fracture of skull. The condition of the bone existed prior to the operation and rendered the tissue much more susceptible to trauma. Blood Wassermann showed four (4) plus positive.

San Francisco Shows Lowest Infant Mortality

SAN FRANCISCO DEPARTMENT OF HEALTH.

The following statement prepared by Health Officer William C. Hassler on births for the fiscal year 1918-1919 and deaths of infants during the same period is presented as being worthy of particular mention owing to the interest that has been displayed within recent times concerning Baby Welfare.

Births registered.

1918	Males	Females	Totals
July	345	339	684
August	415	383	798
September	407	378	785
October	418	366	784
November	354	346	700
December	371	338	709
1919			
January	359	310	669
February	330	308	638
March	378	361	739
April	328	334	662
May	370	388	758
June	398	328	726
	4473	4179	8652

The above total is exclusive of 356 stillbirths divided as follows:

Males 211, females 145, an excess of 66 boys over girls.

In the living births the boys exceeded the girls by 264 or 3 per cent. of the total number registered.

The introductory table shows a total of 8652 births recorded—and of this number 725 were born of parents residing outside of San Francisco and this group should rightfully be excluded from the gross total, thus leaving a net total of 7927 to be credited to our city as the natural increment to the population.

The recordation of births as shown by the figures for the fiscal year 1918-19, indicates a marked advance over previous years, the increase over the last five years being from 10 to 15 per cent. Our birth rate per 1000 of population for the year ending June 30, 1919, based on a census of 500,000 inhabitants, gives us 17.3 as compared to the previous three years of 13.5 to 15 per cent. per 1000 (Note—the 10 to 15 per cent. increase first mentioned refers to increase in **number**—the rates per 1000 are calculated on **population percentage**).

It can therefore be safely asserted that San Francisco is at least 98 per cent. perfect insofar as birth registration is concerned.

Physicians—Register Your Births Promptly.

The gross total distributed by color or race of parents gives the following figures: White 8121, Black 38, Chinese 196, Japanese 297.

By nativities, parents registered as straight U. S. born 4320, or 50 per cent. of the entire total; Great Britain 126, Ireland 300, Germany 72, France 77, Italy 747, Scandinavia 157.

2279 births were registered under "mixed parentage" comprising unions representing every country on the globe—589 of these or 25 per cent. being "United States and other"—indicating either father or mother being born in this country. Exclusive of the last named total a tabulation was kept of parentage involving unions between the United States and prominent foreign countries, and these tables show: U. S.-Ireland, 167; U. S.-Germany, 159; U. S.-Italy, 248.

It is interesting to note that under straight Italian and U. S. -Italian parentage 995 births were recorded or 11½ per cent. of the entire total—and the Japanese run up to 297, being far in advance of many of the "straight-parentage" countries, thus with a population of 5000 (estimated) the Japanese standing alone shows a birth rate of 5 per cent. per 1000.

The U. S. census figures do not attempt to segregate the population by nativities, hence it is not possible to figure out the exact percentage of Italian births to their population, but their rate of 11½ per cent. of the entire birth registration gives a fair index as to the fecundity of this race.

Physicians—Report Communicable Diseases without Delay.

Mortality.

"Infant Mortality" as referred to by the U. S. Census Bureau deals with deaths of children up to the age of one year.

For the fiscal year ending June 30, 1919, San Francisco registered 697 deaths of children in this age period.

The total deaths (adults and children) from all causes totalled 10,852, but of this large number 3322 are charged as victims of the two invasions of influenza in October-November. 1918, January-February, 1919; deducting these from the grand total gives us 7530 deaths as the normal rate. Yet even this is a high figure and considerably above our usual total, as our normal pneumonia death rate was augmented by easily 40 per cent. during the influenza epidemic.

The percentage of deaths of infants to the nor-

mal rate from all causes worked out as 9 1-3 per cent.

During the months covering the influenza outbreak—October, November, December and January—deaths of infants exactly doubled over the normal figure for these months, thus indicating that the invasion had a marked effect on women in pregnancy, "premature births" being of more than common occurrence.

Deaths of children under the age of 1 month increased by 50 per cent. over normal during this period, no doubt as a result of many mothers being rendered unfit to properly care for their offspring during the height of the epidemic.

48 children under the age of one year succumbed to influenza given as a direct cause of death, 65 died of broncho-pneumonia and 25 of lobar pneumonia, many of these last two causes doubtless being complicated with influenza.

170 babies died within 24 hours after birth, 71 lived one week, 118 died between the age of one week and one month.

This makes a total of 359 deaths under one month or 50 per cent. of the total deaths of infants for the fiscal year.

Physicians—Varicella Cases Should Always be Reported At Once.

The main issue which seems to concern those most interested in the subject of infant mortality is the question of improper feeding, or a poor milk supply and its possible bearing on diarrheal diseases, "summer complaint," etc., common to very young children.

Under the heading of "Diarrheal Diseases" (under 2 years) the deaths for 1918-19 show a total of 56 under 1 year—this including 10 under the age of 1 month. Therefore it is plainly evident that this class of diseases has but little bearing on the infant mortality situation in San Francisco, and we are led to believe that the character of our milk supply is largely responsible for this favorable showing.

As a matter of fact in a report issued several weeks since by the New York Milk Commission the City of San Francisco is credited as having the lowest infant mortality rate of any city in the Union with a population of 300,000 or over.

This finding was the result of an exhaustive survey made by this Commission covering the period for the calendar year 1918, its chief object being to secure data on deaths of infants caused by improper feeding and its consequent effect on the gastro-intestinal tract.

In the figures submitted by San Francisco in the questionnaire submitted by the New York Milk Commission the same relative ratio of deaths were maintained as set forth herein and we bore away the palm for conservation of infant life.

Without doubt our climatic conditions have much to do with the splendid general health of our babies—they can be kept out of doors practically all the year round—the excessive heat of summer and the rigors of severe winters are unknown to us—and as a result there is a vigor and vitality that is largely lacking in other large centers where the problem of overcrowding, extreme heat and cruel cold is always presented as the seasons roll around.

Physicians—Remember—The Importance of Promptly Reporting Births.

The last report received from the City of New York (week ending August 9) reports 271 deaths of children under one year during that period—140 from diarrheal diseases alone—at the same ratio this would mean 1084 per month, or one and one half as many as we have here in one year, and while it is true that their population is 10 times as large as ours, their baby deaths are 17 times as great.

Book Reviews

Medical Clinics of North America. Volume 2, Number 6 (May 1919); Baltimore Number. Octavo 287 pp. Published bi-monthly. Philadelphia and London: W. B. Saunders Company, 1919. Price per year, $10.00.

L. F. Barker: Funicular myelitis. Julius Friedenwald: Personal experiences in treatment of ulcer of stomach. Various types of achylia gastria as revealed by Rehfuss method of fractional analysis. John Ruhrah: Epidemic influenza in children. Gordon Wilson: Fundamentals in treatment of pulmonary tuberculosis. P. W. Clough: Pneumococcus sepsis. A. L. Bloomfield: Clinical diagnosis of epidemic influenza. T. R. Brown: Gastric signs and symptoms in diseases other than those of the stomach. J. H. King: Gastro-intestinal disturbances in metabolic diseases and diseases of the ductless glands. E. H. Gaither: Diet in treatment of digestive diseases. E. B. Freeman: Esophagoscopy as an aid in diagnosis and treatment of esophageal disease. F. H. Baetjer: Roentgenologic signs of joint lesions in children. Louis Hamman: Diabetes. Serous membrane tuberculosis. Auricular fibrillation. A. K. Krause: Multiple tuberculosis in childhood.

An Introduction to Neurology. By C. Judson Herrick, Ph. D., Professor of Neurology in the University of Chicago. Second edition; reset. 12mo of 394 pages; 140 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $2.00 net.

Though intended for medical or even pre-medical students, this is a valuable counselor and guide to that numerous body of practitioners to whom neurology is unexplored or ill explored land. Careful study of such a book as this will give anyone a sound basis for erecting diagnosis in nervous diseases, and at the same time will put him in the way of easy acquaintance with the advanced work in neurology which, without such introduction, is apt to be simply bewildering and discouraging.

The development of the nervous system is traced from the lowest organism, and throughout the work this relationship of morphology and function in man, to primitive forms and functions in the lower vertebrates and invertebrates is kept in mind. The clinical application of anatomical and physiological facts and laws is repeatedly insisted upon.

At the end of each chapter is a short but well selected bibliography of sources for those who wish to follow the subject further. With the index is combined a glossary which is a valuable inclusion.

The style is terse and idiomatic and the illustrations, many of which are original, are adequate without being elaborate. E. W. T.

Clinical Lectures on Infant Feeding: Boston Method by L. W. Hill; Chicago Methods by J. R. Gerstley. 377 pages. Philadelphia: Saunders. 1917. Price $2.75.

This book is based on a series of lectures given in North Carolina at the invitation of the University of North Carolina and the State Board of Health. The circuit was six towns, and the authors differed in their background, Dr. Hill speaking for the American school of pediatrics, presenting clean milk, detailed infant hygiene, and percentage feedings as fundamental, in contrast to the European background from which Dr. Gerstley presents his lectures emphasizing the more complex and difficult types of feeding, making boiled milk the prerequisite for bottle-fed infants. This author, after presenting the Finkelstein method for

preparing albumen milk (pages 220-221), follows it by a simplified method (page 235), which, as he does not specify what cream he uses, has not made an accurate substitute for the original method.

The book contrasts vividly the practical and possible methods of infant feeding that have been developed in this country with the more complex technic which infants' hospitals have developed.

The infant mortality of New Zealand has been reduced by teaching simple fundamental facts to all the people, and if the type of traveling lecture given in North Carolina is to be duplicated in other states, the fundamental, simple methods easily reproduced in the homes of the people should be the main curriculum given by the lecturer to the knowledge-seeking physician.

The idea of the clinic coming to the community and interesting the community's physicians as a group is certainly worthy of further trial throughout the country, and the authors, in publishing their lectures and clinic notes, have presented a new idea worthy of adoption. A. B.

Diet in Health and Disease. By Julius Friedenwald, M. D., Professor of Gastro-Enterology in the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore; and John Ruhrah, M. D., Professor of Diseases of Children in the University of Maryland and College of Physicians and Surgeons, Baltimore. Fifth edition, thoroughly revised and enlarged. Philadelphia and London: W. B. Saunders Company, 1919. Octavo of 919 pages. Cloth, $6.00.

This book contains an immense amount of information in regard to food composition and dietetics. By mentioning the sources of their information, the authors have given us a sort of encyclopedia of everything that has been written on diet. As such, it must have a welcome place in the physician's library. It seems to us, however, that this attempt at completeness constitutes the big defect of a book which is supposed to be a guide for the "general practitioner, the interne and the medical student." Let us suppose that a young physician starting practice has to treat a nervous young woman; enteroptotic, underweight, with an atonic, dilated stomach and a floating kidney. He will find diets for nervous dyspepsia on page 467; for nervous affections of the intestine on page 487; for enteroptosis on page 465; for gastric atony on page 439; for gastric dilatation on page 437; and for floating kidney on page 548. What the girl probably needs is some rest from overwork and an overfeeding diet. An inadequate discussion of the rest cure is found on page 427 and a few lines on forced feeding on page 698. The closely related diet for anemia is on page 519; for tuberculosis on page 399.

Our knowledge of dietetics will never advance so long as we make such a complicated mess of it as that. Even if our patients would follow their diets closely, there is no scientific reason why we should prescribe one diet for gastric dilatation and another for gastric atony. The average textbook on treatment is a compilation of the views of many men. In scores of instances the authors must know that the suggestions are worthless or positively harmful, but they carefully avoid any statement which might help the reader in deciding which of several methods should be followed. Thus on page 445, Friedenwald and Ruhrah give the old Boas' nitrate of silver cure for ulcer without warning the reader that it never had any scientific reason behind it; it never did any good; and anyone who uses it now and produces an argyria will be subject to a serious damage suit.

It is to be hoped that in subsequent editions the authors will inject more of their own opinions and experiences into the book. W. C. A.

Correspondence

PREVENTIVE DENTISTRY INVITATION.

To the Editor:—On Monday evening, October 20th, in the rooms of the San Francisco County Medical Society, Medical Building, the Preventive Dentistry Section of the San Francisco Dental Society will consider the treatment of root canals of deciduous teeth, both infected and uninfected. We wish to extend through the columns of your Journal, an invitation to the Medical Profession to attend this meeting and consider the subject with us. I am unable at this time to definitely announce the names of speakers, but we can assure you an evening well spent.

Any space that you can give to this notice will be appreciated.

Very cordially yours,

JOHN E. GURLEY,
Chairman Program Committee.

San Francisco, Sept. 12, 1919.

DR. VAN ZWALENBURG AT A. M. A.

To the Editor:—A report on the meeting of the American Medical Association. Sure I did enjoy it. So many old friends and new. The "Board walk" was a military procession all day long and most of the night—not all in uniform, but the bulk of the men had been in service. Made us poor rascals who could not get in look like thirty cents. One of the common experiences of life—keep us out and then rub it in by telling us what we missed.

The fellows really looked a little sorry the excitement was over. Yes, the universal **restlessness** is apparent all through the profession, wherever I go—changing, changing. Try for a little better place, that seems to be in the air. Many still talk of coming to California, in spite of the well-known fact that California has more doctors and more quacks than any place on earth. Must be the California spirit draws them.

I had one taste of it. After my last "spare" had blown out after about twenty tire changes in two days with country blacksmith garages in the Pennsylvania mountains, who should appear but our good friend, Dr. Sill of Oakland. After I had made him go on, saying only four miles to Cumberland on the rim, he came back and insisted on putting one of his spare tires on my car to take me into town. He says, "I would expect the same of you." California spirit. Strange too the only time in now six thousand miles that I have met a Californian on the road.

The presence of so many foreign representatives added greatly to the enjoyment of the Victory meetings and emphasized the new turn in the world's affairs—co-operation, brotherhood.

The papers generally naturally dealt largely with the war experiences, and much time was taken to discuss what we don't know about influenza.

In the House of Delegates things moved on very smoothly. The election of president promsied an interesting time with several candidates, but all contest vanished and what little political moves appeared passed into history as among the smoothest and most gentlemanly ever attempted.

Yes, I am still on my vacation—a most enjoyable one. Home in October. Everywhere the dominant comment is upon the general unrest so apparent everywhere, but through it all and particularly in the medical profession runs the note of tolerance, co-operation and mutual helpfulness, and out of it all is coming a better understanding, a more united profession, a real brotherhood.

Very sincerely,

C. VAN ZWALENBURG.

Detroit, Mich., Aug. 26, 1919.

Immunity

The Journal will express no opinion of and assume no responsibility for the views of "Immunity" correspondents. They must win or lose on their own merits by abounding in their own wisdom, and each reader must appraise each communication for what it is worth and take it for better or worse.

Communications will not be signed when published, but the author must be known to the editor. Send on your complaints, your kicks, your knocks, your boosts. We want constructive and destructive criticism. Air your pet hobbies. You are not limited to your own town or the medical profession.

A MAN OF RARE JUDGMENT.

To the Editor:

It is gratifying to note that your editorials display concise up-to-date matter which ought to be of interest to every member of the State Society. If you were able to prevail upon the Program Committee to insist on shorter, more condensed papers read at the State Society meetings and thereby eliminate the cost of printing this unreadable junk, you would enhance the value of the Journal.

A READER.

San Francisco.

State Society

Acting upon the decision of the Council, the Medical Society has taken up the matter of acquiring new members. A great many good men come into our community who do not affiliate themselves with the county societies. Very often it is purely a matter of oversight. At other times there are men who have severed their connection with the county society for personal reasons, and do not re-establish that relationship because they have not been asked. Therefore, we are undertaking a campaign and county secretaries may be called upon to co-operate with the Council in this matter. Our agent at present is Mrs. R. V. S. Berry, who has been given full authority to canvass the state for new members and who is now at work on this rather comprehensive job. In the course of time she will visit practically every large center in California, and we shall expect the local county societies to give her all the assistance possible.

The Publicity Bureau has also established the beginnings of a lecture bureau, to be utilized by the county societies thoughout the state. We have obtained a list of men of prominence in the profession who have agreed to go where they are called and deliver scientific talks, illustrated by lantern slides, when necessary, and specimens, and who represent the best thought in the profession today. The county societies will be sent a list of these lecturers and the topics upon which they will hear a man talk. Provision will also be made to furnish the lantern and other appliances for demonstration where these are necessary, the expense being borne by the county society and the arrangements being made by the State Society office. By this plan we hope to stimulate the attendance at the county society meetings and further the advancement of science.

Again we must ask all county secretaries to send in the names of prospective new members in order that this office may pass upon the eligibility to membership of men not well known in their community. In this way only can we keep out undesirable applicants, for once a man is elected to membership it is not always an easy matter to prove that he was admitted without sufficient investigation and to drop him from the list.

The regular quarterly meeting of the Council will be held on or about October 25th in Los Angeles.

County Societies

LOS ANGELES COUNTY.

Announcement of Operative Course.

Medical Department University of California.

Dr. Foster K. Collins, who has just returned from overseas service, will again resume his work at the Los Angeles Medical Department of the University of California. A course of operative surgery on the cadaver and on the dog will be commenced within the next several weeks. Time of beginning, the class and hours will be through mutual arrangements with the members of the class. The course will roughly cover practically all of the operations in general surgery. For further information address Dr. Foster K. Collins, 1318 Baker-Detwiler Bldg., telephone 66133.

Returned from Service.

Dr. Herbert V. Mellinger, 608 Baker-Detwiler Bldg.

Dr. Ernest L. Commons, 1100 Brack Shops.

Personals.

Local Surgeon Released from Navy.

Senior Lieutenant J. C. Horton, local surgeon and for the past two years a medical officer in the United States Navy, received notice yesterday that his request to resign was granted by Naval Secretary Daniels, to take effect immediately, so that he will return to his private practice in this city immediately.

Dr. Horton had entire charge of the big Naval influenza quarantine camp in Los Angeles, where thousands of sailors and marines were held during the epidemic.

Dr. Etta Gray of Los Angeles is Sent Abroad to Study Conditions.

Dr. Etta Gray of Los Angeles, president of the War Work Committee of the National Medical Women's Association, which has sponsored and financed the American Women's Hospital Service in France and Serbia, will sail for one year's duty in those two countries.

The American Women's hospitals have about $100,000 in their treasury now, the result of public subscriptions and the aid of co-operating organizations, including the American Red Cross and the American Committee for Devastated France. More than 100 women served in France and Serbia from this organization after America entered the war and several units are now in various hospitals there.

Cowles Quits, But Mayor Says "No."

Dr. J. E. Cowles resigned as a member of the Playground Commission when Mayor Snyder took office. The Mayor declined to accept Dr. Cowles's resignation as he desired him to remain on the board. This is an unpaid board, the members of which even pay their own expenses on their inspection trips.

Dr. Mellinger Returns.

Dr. Herbert V. Mellinger, formerly of Chicago and who during the war served as a medical officer with the Sixty-fifth Regiment, Coast Artillery from California, has returned from duty overseas and is now living in Los Angeles, and has opened an office.

Pomona Surgeon Tells of America's Medical Men.

Sixteen thousand physicians and surgeons, 12,000 nurses and 122,000 listed men in the medical department served the American Army in France according to figures made public by Dr. J. K. Swindt of Pomona, in an address to the members of the Pomona Chamber of Commerce on his return from overseas. Thirty-three thousand American physicians voluntereed for service, said Dr. Swindt, and those who served the men overseas cared for 195,000 wounded, of whom 182,000 recovered. Pneumonia and influenza caused the death of 8000 men. Of the 2,200,000 American soldiers in France only 1,000 devloped cases of typhoid, and of these only fifty died. In the Spanish-American war more American soldiers died of

typhoid and other diseases than were killed in battle.

Dr. Swindt said there were 72,723 deaths in the American Army during the war, 32,000 men being killed outright, 13,479 dying of their wounds, 22,000 of diseases and over 4,000 suffered accidental deaths.

"When the Americans first entered the great world war," said Dr. Swindt, "the physicians and surgeons were allowed to go to the front-line trenches. As a result, many were killed, and shortly thereafter an order was issued keeping all of them out of the trenches, as they were needed to keep the fighters up to condition and it is was considered unwise to expose them to unnecessary and useless danger. The casualty list of doctors rapidly diminished after that."

Dr. Swindt pointed with pride to the accomplishment of the medical department in landing a base hospital in France one month and one day from the date the United States entered the war. Another accomplishment that reflected the efficiency of this branch of the service was that of keeping 94 per cent. of the fighters always in condition for active duty. Only three per cent. indisposed by wounds and the other 3 per cent. by sickness. Dr. Swindt said this was a record that has never been approached in any other war.

Several notable buildings were used for American hospitals on the other side, among the most notable being the Haviland china factory.

The great size of some of these hospitals was another feature touched upon by the speaker, who said one contained 25,000 beds and would have been enlarged to hold 40,000 beds if the armistice had not been signed when it was. An interesting side light was the statement that there were 15,000 more beds in the base hospital than were actually needed at the close of the war.

The necessity of quick work was emphasized when the speaker said the surgeons in the hospital worked in shifts of four hours.

Capt. Orbison's Task on the Baltic.

An interesting insight into the work of the American relief administration in Europe, and the tasks and achievements that are earning for this country the gratitude and confidence of the world, is furnished through the correspondence of Capt. Thomas J. Orbison, Los Angeles physician, now in charge of the relief work in Libau, on the Baltic.

Capt. Orbison assumed charge of the first actual distribution of food in Libau on June 5. Libau is a city of 63,000 inhabitants. It contains, according to the best official estimates, 19,500 children from 1 to 16 years of age, of whom about 5,000 are under 7 and are absolutely destitute. Their immediate needs according to the official report to the commanding officer of the Baltic mission, are food and medical attention.

The first problem on taking over the work was the formation and correlation of the various local agencies and institutions.

The first job was to deliver food and see that it was properly distributed in eleven city institutions caring for orphans from 5 to 16 years old. Most of these places were well run, and some had small gardens cultivated by the children. But practically every one was small and did not have the needed equipment. At the beginning Dr. Orbison personally supervised the work. Each institution received food supplies sufficient to keep it going one or two weeks.

The next reform put into effect was the rule made by Dr. Orbison that the destitute children had to be fed at the various kitchens instead of supplying their parents with their food allotments. This was enforced because it was feared that children who needed it might not get all the food to which they were entitled. This plan has worked out well.

The examinations of children showed that there was need for drastic measures in counteracting the curable ailments, and one result of the examination method was that Dr. Orbison called a meeting of all physicians in Libau. In addition to the leading men of the profession, the mayor and chief business men of the city attended. Dr. Orbison's address was received with enthusiasm, and a committee of six was organized to formulate and operate clinics similar to the ones in the United States.

Win Health in Open Air.

According to Jennie Van Allen, while awaiting the establishment of a permanent preventorium in the vicinity of Los Angeles, the Los Angeles Tuberculosis Association is doing a splendid work by giving several hundred children the mental, moral, physical and spiritual stimulus of summer health camps.

The first camp was established at Hermosa Beach three years ago. Last year 220 boys and girls predisposed to the white plague were given a fortnight's outing at the open-air camp at Devil's Gate, Pasadena, donated by the Supervisors. The site being needed for public improvement work, a camp in the San Gabriel Canyon, ten miles from Azusa, was this year placed at the disposal of the association, and Miss Sidney M. Maguire, executive secretary, pronounces it a perfect location.

At the camp over 400 boys and girls from Los Angeles and Pasadena have been given a month's outing in the mountains, thanks in large part to the Junior Red Cross, of which Mrs. J. J. A. Van Kaathoven is chairman, which made the splendid gift of $3.000. This organization is composed of school children and it was their express wish that their savings should go to help less fortunate children.

The City Council donated $500 and the Tuberculosis Association received nearly $1,000 in reply to circular letters sent to the citizens of both cities, who believe that the municipal stability depends upon the child of to-day who will be the citizen of to-morrow. Supt. Martin of the County Hospital loaned all the beds and bedding that could be spared from the institution, and the Brunswig Drug Company sent toothbrushes for every child. Needed clothing, games and hammocks, swings and other equipment added to the comfort of the camp, which included sleeping tents and pavilion, headquarters and tents for mess, hospital and recreation. The sports included baseball and basketball, croquet, punch bags, hiking and fishing.

The camp, which owes its existence to the energy of Miss Maguire, is conducted on military lines with Frank W. Otto, a medical student, as physical director. His days are full of action, and in addition to his other duties he officiates morning and evening at the raising and lowering of the flag, and also supervises the exercises inaugurated last year by Mrs. Zella V. Ornum Glimm, an authority on breathing and postural exercises, who has given her services several times a week during the three camp seasons.

The camp is under strict military hygiene and is in the highest sense of the word a health camp. Every child needs special care and discipline, as all are handicapped by inherited disease. Garbage is hauled away and tin cans and papers buried. The fly problem is eliminated, as every building is screened, the drainage is perfect and the sanitation above criticism by the Los Angeles Board of Health.

Miss Gertrude MacIntosh, the "real mother" of the camp, is on duty day and night. As head she must be doctor and surgeon in all the accidents and emergency cases, and her hospital tent is headquarters for all the troubles from a stubbed toe to a slight scalp wound received in the age-old game of defending the camp from invasion. Children are weighed once a day and during their stay have gained from two to ten pounds. There is

no distinction of race and all are taught they are good American citizens regardless of color or creed.

Dr. Hannah J. Beatty and Dr. Maria Pattrick visit the camp on alternate weeks to examine these children, who are suffering from malnutrition and a predisposition to ills that inevitably affect an under-par child born of a long line of physically incompetent men and women.

Mrs. Des Camps is the matron of the camp. She was with the Thirty-fourth Division at Camp Doniphon, Fort Sill, Okla., and has soldierly tactics in enforcing order and cleanliness.

The association makes a powerful appeal to the officials and citizens of Los Angeles county to make immediate preparation to meet this tremendously important issue. A preventorium is needed in the coming winter. It is the country's duty to save the children from tuberculosis and stop the useless waste of human life and energy.

A week at the seashore and a fortnight or a month in the mountains start children on the road to health. But what is a week, a fortnight or a month when balanced against the life of a child? Make it twelve months for all the years he needs medical supervision. Liberally endow a permanent preventorium. Make it the biggest and finest in this United States, so that every child who has a touch of the white plague can have scientific care. It is the finest investment Los Angeles County can make.

New Hospital at Pasadena.

A six-story hospital building for the plant of the Pasadena Hospital Association, a semi-philanthropic institution, will be erected here within the next few months at a cost of $500,000. The new building will adjoin the present building of the Pasadena Hospital at Pasadena avenue and Congress street. It will contain the latest approved hospital facilities and equipment and will provide increased hospital accommodations to meet the growing needs of the city. The new building will be built under the direction of a special committee of the association, comprised of David Blankenhorn as chairman, Theodore Coleman as secretary and treasurer, Judge G. A. Gibbs, Mrs. George E. Hale, Dr. Chas. D. Lockwood, John McWilliams and John S. Cravens. The committee will have architects prepare plans for the new building at once.

Sees Need for New Hospital.

Pleading for the establishment of more Seventh Day Adventist hospitals and sanitarium in Southern California, Dr. W. J. Johnson of the Glendale Sanatorium spoke before a large audience at the camp meeting at Western and Melrose avenues. The denomination now has three sanatoriums and one hospital in this part of the state, located at San Diego, Loma Linda, Glendale and Los Angeles, besides a large sanatorium at St. Helena, Cal., and another in Portland, Ore. It also has twenty-four other medcal institutions in various parts of the world.

Deaths.

Dr. Anne W. Nixon, 461 East Colorado street, Pasadena, Cal.; Cooper Medical College, San Francisco, Cal., 1892; licensed 1893; age 75 years; died after a long illness May 11, 1919, of heart disease. Dr. Nixon was a member of the California State Medical Society. She was a widow and left no relatives.

Dr. William Bradley Towler, age 76 years, died August 12, 1919, at his home, 1217 West Forty-seventh street. Dr. Towler was a graduate of Victoria University, Toronto, Canada, May 5, 1896. After practicing his profession in Toronto for forty years he was forced to move to Southern California on account of ill health. He was licensed in 1896. For the past twelve years he had devoted his time to church and philanthropic work. He leaves a widow and a sister, Mrs. Robert McIndoo of Fresno.

Tots' Dentist Dead.

Dr. Birdine M. King, who was 52 years of age, died August 11, 1919, at her home, 706 South Chicago street. She came here from Gridley ten years ago to take charge of the dental work at the O. T. Johnson dispensary, which was later taken over by the Board of Education. Her death followed an operation performed some time ago.

Dr. King was frequently called "the children's dentist," having pioneered the dental clinic work here. She was a member of the Women's Professional Club and of the Southern California Dental Society and the Women's Dental Society.

Dentist Succumbs.

Well-Known Resident Fails to Rally from an Operation.

Dr. Wallace H. McHardue, 33 years old, died August 25 at the Angelus Hospital, after an operation from which he failed to rally. Dr. McHardue, who has resided in Southern California for the past fifteen years, was well known in Los Angeles, having made many friends during his residence here. He was a graduate of the dental college of the University of Southern California. After his graduation from college he practiced for ten years at Colton. Two years ago he returned to Los Angeles and opened offices at his residence on West Twenty-third street. He was a member of the Southern California Dental Society, and of the Colton chapter of the Masons. Dr. McHardue is survived by a widow and two children.

MENDOCINO COUNTY.

A regular meeting was held on September 6th at Fort Bragg, in the office of Dr. Harper Peddicord. Present: Drs. C. L. Sweet, Harper Peddicord, F. McLean Campbell, L. C. Gregory and Oswald H. Beckmann; the president, Dr. C. L. Sweet, in the chair. The business part of the meeting was attended to, but as those on the program failed to materialize, their part of the meeting was turned into a social smoker. After the meeting we drove over to Dr. Peddicord's residence, where Mrs. Peddicord had prepared a very choice venison lunch. It received full justice from the partakers. All the credit for this banquet should not be showered on the mistress of the house; the doctor himself had supplied the venison by his prowess as a nimrod. It was all very well for Dr. Peddicord to bring down the buck with a rifle bullet, if it had been the County Society secretary it would not have been good form. That individual would have been expected to follow in the footsteps of his chief, the State Society secretary, and use the bow and arrow. Then what would have taken the place of the venison? This secretary is not even competent to bend the bow.) Thanks to Dr. Peddicord from the guests and a toast for his good wife.

ORANGE COUNTY.

The regular monthly meeting of the Orange County Medical Society for August met in the Library Building, Santa Ana, and was well attended. The paper of the evening was given by Dr. Wilson of Los Angeles, entitled "Repair of injuries of the bones of the upper extremity." The address was illustrated by many stereopticon views and proved to be of much interest to all. After the scientific part of the program was finished the members retired to James' Cafe to enjoy a delicious luncheon.

Dr. John Wehrley was the chief speaker at the September meeting. The doctor's paper, entitled "The laboratory as an aid in medical practice," brought out a most interesting and profitable discussion. Having had a wide experience in the war and an opportunity to study many cases, the doctor's experiences held his audience to a late hour. His research work in gastric ulcer developed a

new diagnostic symptom which was referred to several times by different speakers as "Wehrley's sign," which may yet place the speaker among the immortals.

Drs. Burlew and Maroon have just returned from a visit to Eastern clinics.

Dr. V. P. Osburn has accepted a position with Drs. Johnston and Wickett as internist.

SAN DIEGO COUNTY.

A splendid tribute was paid to the organization and progress of the League for the Conservation of Public Health by a large meeting of physicians of San Diego and adjoining counties, held in the Medical Library rooms, San Diego, on the evening of Tuesday, September 9th.

Dr. F. A. Burton, president of the San Diego County Medical Society, presided, and after two hours of excellent speeches a profitable evening was terminated by light refreshments and a social session.

Dr. John C. Yates of San Diego, president-elect of the State Society, briefly outlined the events leading up to the organization of the League, which auspiciously occurred in San Diego about two years ago.

The chief speaker of the evening, Mr. Celestine J. Sullivan, executive secretary of the League, was then introduced, and after tracing in eloquent words the early history of the development of freedom in California, touching with a master hand the outstanding figures from Junipero Serra to the present day exponents of liberty, he emphasized the absolute necessity of organization in the development of any movement and strongly urged his hearers to bend their energies to the securing of a more desirable medical practice act to replace the worn-out vehicle that now serves as an apology for one.

While detailing some of the triumphs of the League during the brief period of its existence in the matter of curtailing vicious legislation in matters medical, he tersely expressed the objects of the League by saying that all acts and plans of the League must stand the acid test, "Is it for the public good?"

After outlining the various classes of League membership he stated that many of the hospitals in California had already become members of the League and that the ideals of hospital standardization in California through the League's efforts would be rapidly realized. The rallying to the support of the League on the part of the doctors, lawyers, druggists, nurses, business men, manufacturers, corporations and institutions of learning, all express belief in not a "medical trust" but a high trust in the profession of medicine. He exhorted the physicians before him to awaken to the fact that much of the public health work which is so popular at the present time begins and ends largely with the exploitation of the doctor. The time has come for the doctor to take the initiative in the organization and conduct of public health crusades. The speaker repeatedly urged the physicians to educate their legislators to a proper conception of the relations between the medical profession and the community in order to pave the way for a more intelligent discussion of a stronger and better medical practice act to comport with the enlightened vision of the people of our great commonwealth of California.

He closed by quoting from Roosevelt that admirable dictum: "Every man owes to his profession a portion of his time and some of his money to aid in its upbuilding."

Dr. W. T. McArthur of Los Angeles gave a brief resumé of how the profession of Los Angeles organized itself in support of the League. While expressing the belief in the absolute need of unity and organization, he declared that there was room for the individual giving of time and money on the part of every licensed medical man in the state.

Dr. G. G. Moseley of San Francisco, one of the group of founders of the League, spoke briefly on the demand for organization and centralized power. He also drew attention to the splendid opportunity which the profession enjoys through an organization like the League in enabling it to give to the people, through the press and other proper means of publicity, valuable knowledge on matters of personal and public health.

Dr. G. L. Cole of the Los Angeles Medical Society gave a brief but forceful testimony of his conversion from an attitude of skepticism regarding the League at the time of its formation to one of utmost faith and enthusiasm at the present time.

Dr. Harlan Shoemaker, secretary of the Los Angeles County Medical Society, spoke glowingly of the cordial relations developing between the various county units as the result of the League's activities drawing them more closely together than the State Society had previously succeeded in doing.

Dr. D. C. Strong of San Bernardino also paid tribute to the accomplishments of the League in the brief eighteen months of its initial effort.

Major J. F. Percy of Camp Kearny spoke of some of his experiences and observations while head of the committee on medical legislation of the Illinois State Medical Society. He characterized the California League movement as the most potent attempt indirectly to express medical progress that he had ever seen.

Dr. H. P. Newman of San Diego expressed his thorough endorsement of the movement.

Dr. Martha Welpton of San Diego enthusiastically stated that the medical women of San Diego were a unit in their support of the League.

Dr. P. M. Carrington, one of the founders of the League, expressed himself as feeling that the time was ripe for an appeal for members and financial suport from those present.

On formal motion the chair appointed a membership committee of three to receive voluntary contributions for the support of the League. Several hundred dollars were promptly raised in this way.

As a generator of enthusiasm and confidence in the League's future, this meeting was a pronounced success.

SAN FRANCISCO COUNTY.

Dr. Ernest C. Dickson has returned to the Stanford University Medical School from military service overseas. While abroad Dr. Dickson was posted with No. 4 Canadian General Hospital, the University of Toronto unit, having charge of the acute medical service, and being supervisor in internal medicine.

Dr. William Palmer Lucas, Professor of Children's Diseases at the University of California Hospital, chief of all the work at the University for children, has received the notification from Monsieur Andre Tardieu, French Minister in charge of his government's American affairs, that the French government has conferred upon Dr. Lucas Chevalier de la Legion d'Honneur, with the gratifying comment that the French people with whom Dr. Lucas had worked for the children of France, had asked that he be decorated. At the same time Dr. Lucas was notified that the Minister of the Interior had conferred upon him France's highest medical decoration, "La Medaille de Vermeil des Epidemies," for services rendered to children of France.